

APPENDIX F.—PLANTS AND ANIMALS OF FORFAR. 209

Aspidium *Oreopteris*
**Ranunculus* *alpestris*; but
 rare
Azalia *procumbens*
Gnaphalium *supinum*; and
 a variety
 " *sylvaticum*; but
 rare
Betula *nana*
Veronica *alpina*
 humifusa
**Eriophorum* *gracile*
Arbutus *Uva ursi*
Pyrola *rotundifolia*
 " *uniflora*; but rare

Thalictrum *alpinum*
Tofieldia *palustris*
Hedypnois *taraxaci*
Salix *herbacea*
Vaccinium *uliginosum*
 Vitis-*Idaea*
Trientalis *europaea*
Rubus *Chamaemorus*
Silene *acaulis*
Cerastium *alpinum*
 latifolium
* " *nivale*, *nova*
 species
Malaxis *paludosa*
Lycopodium *annotinum*

On mountains to the eastward of Clova, I discovered the beautiful *Potentilla* *tridentata*, new to our British Flora.

On the rocks among the Clova mountains, are to be found the following interesting plants:

Pteris *crispa*
Aspidium *Lonchitis*
Epilobium *angustifolium*
Ilex *Aquifolium*
Sonchus *ceruleus* of Fl.
 Brit.; truly a rare plant.
 The *Sonchus* *Canadensis*
 of Linnæus, although
 given by Dr. Smith as a
 synonym, is a very differ-
 ent plant. *S. ceruleus*
 is now lost at Howden
 Pans, in England; and at
 present we know of no
 other habitat for it but
 the Clova mountains, and
 their vicinity
Draba *incana*; and likewise
 var. β
Poa *flexuosa*
 " *glaucia*
Melica *nutans*
Pyrola *secunda*
Potentilla *aurea*
**Salix* *rupestris*
 " *prunifolia*
 " *Andersoniana*

Salix *arenaria*
 " *incubacea*
 " *glaucia*
**Hieracium* *divaricatum*
 " *cerinthoides*
* " *amplexicaule*;
 besides several
 non-descript
 species
**Tussilago* *alpina*
**Cochlearia* *groenlandica* of
 Linn.
* " *alpina*, *nov. sp.*
**Lychnis* *alpina*
**Potentilla* *opaca*
**Arenaria* *fasciculata* of Jac-
 quin; the fastigiata of
 English Botany
Serratula *alpina*
Carex *laxa* of Whalenberg
 " *atra*
 " *pallescens*; and
 several non-
 descripts of that
 genus
Cyathea *dentata*

On the upland pastures grow the *Satyrium albidum* and *Satyrium viride*.

Among the rarer Mosses to be found among these mountains, may be mentioned the following :

<i>Hypnum pulchellum</i>		<i>Polytrichum hercynicum</i>
" <i>denticulatum</i>		" <i>strictum</i>
" <i>undulatum</i>		" <i>alpinum</i>
" <i>alpinum</i>		" <i>attenuatum</i>
" <i>plumosum</i>		<i>Bryum compactum</i>
" <i>myosuroides</i>		" <i>bimum</i>
" <i>implexum</i>		" <i>crudum</i>
" <i>molle</i>		" <i>Zierii</i>
" <i>Schreberi</i>		<i>Bryum julaceum</i>
" <i>rufescens</i>		" <i>alpinum</i>
" <i>fluitans</i>		" <i>trichodes</i>
" <i>stellatum</i>		" <i>dealbatum</i>
" <i>rugosum</i>		" <i>elongatum</i>
" <i>revolvens</i> ; and some non-de- script species of this genus		<i>Neckera curtipendula</i>
<i>Bartramia gracilis</i>		" <i>crispa</i>
" <i>arcuata</i>		" <i>pumila</i>
" <i>Merchiana</i>		<i>Gymnostomum microsto-</i>
" <i>Halleriana</i>		<i>mum</i>
" <i>crispa</i>		" <i>lapponicum</i>
" <i>ithyphylla</i>		" <i>fasciculare</i>
<i>Tortula brevifolia</i>		" <i>stelligerum</i>
" <i>tortuosa</i>		" <i>curvirost-</i>
<i>Trichostomum fontina-</i>		<i>rum</i>
" <i>loides</i> ; and var. β		<i>Buxbaumia foliosa</i>
" <i>lineare</i>		<i>Splachnum rugosum</i>
" <i>glaucescens</i>		" <i>gracile</i>
" <i>microcarpon</i>		" <i>tenue</i>
" <i>rigidulum</i>		" <i>angustatum</i>
" <i>capillaceum</i>		" <i>mnioides</i>
" <i>trifarium</i>		" <i>fastigiatum</i>
" <i>ericoides</i>		" <i>ovatum</i>
<i>Grimmia ciliata</i>		<i>Dicranum fuscescens</i>
" <i>striata</i>		" <i>flagellare</i>
" <i>conostoma</i>		" <i>uncinatum</i>
" <i>nigrita</i>		" <i>falcatum</i>
" <i>Schisti</i>		" <i>fulvellum</i>
" <i>Donniana</i>		" <i>rufescens</i>
" <i>heteromalla</i>		" <i>ovale</i>
" <i>recurvata</i>		" <i>patens</i>
" <i>acuta</i>		" <i>montanum</i> , rare
" <i>rivularis</i>		" <i>squarrosum</i>
		" <i>flexuosum</i>
		" <i>polyphyllum</i>
		" <i>strumiferum</i>
		" <i>virens</i>

<i>Dicranum crispum</i>		<i>Jungermannia reptans</i>
" <i>osmundioides</i>		" <i>adunca</i>
* " <i>pygmæum</i>		" <i>jlacea</i>
<i>Jungermannia bifida</i>		" <i>cochleari-</i>
" <i>ciliaris</i>		<i>formis</i>
" <i>divaricata</i>		" <i>trilobata</i>
" <i>setiformis</i>		" <i>curvifolia</i>
" <i>emarginata</i>		" <i>resupinata</i>

Besides many others of the foliaceous mosses.

The species of the genus *Lichen* are, as might be expected, very numerous in these mountains. This extensive Linnæan genus has lately undergone a change in arrangement, and a subdivision into several genera, by the eminent Dr. Acharius. In mentioning the most remarkable, I shall adopt the new nomenclature.

<i>Lecidea Muscorum</i>		<i>Gyrophora cylindrica</i>
" <i>petræa</i>		" <i>pellita</i>
" <i>miscella</i>		<i>Verrucaria nitida</i>
" <i>rivulosa</i>		" <i>stigmatella</i>
" <i>confluens</i>		" <i>epidermidis</i>
* " <i>fumosa</i>		" <i>umbrina</i>
* " <i>fusco-ater</i>		<i>Endocarpon smaragdulum</i>
" <i>dendritica</i>		" <i>miniatum</i>
" <i>atro-alba</i>		" <i>complicatum</i>
" <i>silacea</i>		" <i>Weberi</i>
" <i>Ederi</i>		<i>Thelotrema hymenium</i>
" <i>niveo-ater</i>		" <i>pertusum</i>
" <i>pruinosa</i>		<i>Sphærophoron coralloides</i>
" <i>cupularis</i>		" <i>compressum</i>
" <i>Dicksonii</i>		<i>Isidium corallinum</i>
" <i>tricolor</i>		" <i>Westringii</i>
" <i>icmadophila</i>		<i>Urceolaria calcaria</i>
" <i>luteola</i>		" <i>cinerea</i>
* " <i>atrata</i>		" <i>fimbriata</i>
" <i>granulosa</i>		" <i>Hoffmanni</i>
" <i>cinereo-fusca</i>		" <i>scruposa</i>
" <i>calva</i>		" <i>Acharii</i>
" <i>cæsio-rufa</i>		" <i>cirtaspys</i>
" <i>orosthea</i>		* " <i>ostracadermis</i>
" <i>polytropa</i>		" <i>diamarta</i> of
" <i>atro-rufa</i>		" <i>Acharius</i>
" <i>lurida</i>		<i>Parmelia ventosa</i>
" <i>canescens</i>		" <i>perella</i> , var. 3.
" <i>vesicularis</i>		" <i>Upsaliensis</i>
" <i>pustulata</i>		" <i>tartarea</i> , var. 2.
<i>Gyrophora glabra</i>		" <i>frigida</i>
" <i>erosa</i>		" <i>dispersa</i>
" <i>proboscidea</i>		" <i>cerina</i>

<i>Parmelia vitellina</i>	<i>Parmelia crispa</i>
" <i>hypnorum</i>	<i>fascicularis</i>
" <i>brunnea</i>	" <i>furfuracea</i>
" <i>candelaria</i>	" <i>jubata</i> , var. 4. <i>chalybeiformis</i>
" <i>gelida</i>	
" <i>circinata</i>	<i>Sticta limbata</i>
" <i>epigea</i>	" <i>sylvatica</i>
" <i>miniata</i>	<i>Peltidea aphthosa</i>
" <i>cæsia</i>	" <i>resupinata</i>
" <i>recurva</i>	" <i>crocea</i>
" <i>fahlunensis</i>	" <i>saccata</i>
" <i>conpersa</i>	<i>Cetraria nivalis</i>
" <i>haematomma</i>	" <i>islandica</i>
" <i>pulverulenta</i>	<i>Cornicularia aculeata</i>
" <i>stygia</i>	" <i>tristis</i>
" <i>affinis</i>	" <i>spadicea</i>
" <i>plumbea</i>	" <i>lanata</i>
" <i>caperata</i>	" <i>pubescens</i>
" <i>herbacea</i>	<i>Stereocaulon paschale</i>
" <i>glomulifera</i>	<i>Bæomyces roseus</i>
" <i>scrobiculata</i>	" <i>rupestris</i>
" <i>pulmonacea</i>	" <i>Papillaria</i>
" <i>saturnina</i>	" <i>bellidiflora</i>
" <i>lacera</i>	" <i>cenoteus</i>
" <i>nigrescens</i>	" <i>spinosus</i>

The plants, natives of the Clova mountains, which have the chief claim to the farmer's notice, are the Gramina. Of the rarer grasses, the first is the *Alopecurus alpinus*, a new species which I discovered many years ago. This grass I have cultivated for several seasons, and I am convinced it is but little inferior to the *A. pratensis*, so much taken notice of by agricultural writers. It has the advantage of the latter, in so far as it increases more freely in the roots, and readily produces perfect seeds, the want of which is sometimes complained of in the *A. pratensis*. The next is *Phleum alpinum*, which forms a considerable part of the pasture on the mountains of some of the northernmost parts of Europe, and seems a grass well calculated for pasture in alpine districts. *Poa nemoralis*, *Poa glauca*, and *Poa alpina*, and the variety *vivipara*, are all good grasses; the *P. alpina* is one of our best pasture grasses on poor soil, with a bad climate. Lately I discovered three other grasses, new to Britain, viz. the *Avena plano-culmis* of Schræder, *Fl. Germanica*, producing a great quantity of foliage; the *Aira leavigata*; and the *Phleum Meichelii*, the *Phalaris alpina* of the German authors: these grasses grow on the very summit of the highest mountains.

The pasture on the mountains, particularly on the summits, is composed of the following grasses:

<i>Eriophorum vaginatum</i>	<i>Carex dioica</i>
" <i>angustifolium</i>	" <i>cæspitosa</i>
<i>Scirpus cæspitosus</i>	" <i>recurva</i>
" <i>pauciflorus</i>	" <i>ampullacea</i>
<i>Melica cœrulea</i>	" <i>Micheliana</i>
<i>Nardus stricta</i>	" <i>limosa</i> ; but rare
<i>Aira flexuosa</i>	" <i>panicea</i>
" <i>cæspitosa</i> ; together	" <i>pilulifera</i>
with var. <i>vivipara</i>	" <i>præcox</i>
<i>Agrostis vulgaris</i> , several	" <i>flava</i>
varieties	" <i>teretiuscula</i> ; but
<i>Festuca vivipara</i>	rare
" <i>ovina</i>	" <i>curta</i>
" <i>duriuscula</i> ; and	" <i>stellulata</i>
also var. <i>dume-</i>	" <i>pauciflora</i> ; but
<i>torum</i>	sparingly
" <i>cæsia</i>	" <i>pulicaris</i>
<i>Poa humilis</i>	<i>Juncus trifidus</i>
" <i>decumbens</i>	" <i>squarrosum</i>
<i>Carex binervis</i>	" <i>articulatus</i>
" <i>rigida</i>	" <i>uliginosus</i>
" <i>fulva</i>	" <i>spicatus</i>
" <i>Oederi</i>	" <i>campestris</i>

The pasture in the valleys in the high lands is the same as in the low lands, only with the addition of the *Meum athamanticum*.

Angusshire has some of the best grasses growing native by the sides of the rivers and rivulets: such as the *Alopecurus pratensis*, *Festuca elatior*, *Festuca pratensis*, *Festuca triflora*; the latter but rare. I have observed, although sparingly, the *Festuca loliacea*. I have of late discovered a non-descript species of *Festuca*, which seems to be equal, if not superior, to almost all the known species. We have also a number of the genus *Poa*, and some non-descript species of that genus. The *poa* furnishes some of the best grasses we are acquainted with, viz.:

<i>Poa trivialis</i>	<i>Poa pratensis</i>
" <i>glauca</i>	" <i>nemoralis</i>
" <i>alpina</i>	" <i>humilis</i>

The *P. alpina* and *P. humilis* form excellent pasture in alpine or barren districts.

As we descend from the high lands, the vegetables are, with few exceptions, the same as in the neighbouring counties: some, how-

ever, are rather of rare occurrence. In several of the woods are to be found the *Ophrys cordata* and *ovata*, *Trientalis europaea*, *Hieracium molle*, *prenanthoides*, *sabaudum*, and *paludosum*; and in the fir woods near Forfar grow the *Hieracium paniculatum*, var. *maculatum*, not yet found in any other part of Britain; together with the beautiful *Trollius europaeus*, *Pyrola minor* and *rotundifolia*; and also *Juncus Forsteri*, *Melica uniflora*, *Carex pallescens*, *remota*, *sylvatica*, *laevigata* and *pendula*, *Triticum caninum*, and *Festuca gigantea*. *Milium effusum* likewise occurs: this grass, although never noticed by agricultural writers, promises to be useful, producing abundance of foliage, which is grateful to cattle. By the side of the Isla grow the beautiful *Orobus sylvaticus*; and *Ribes petraeum*, which may prove equal, if not superior, to the *R. rubrum*: also *Ribes Grossularia*; *Vicia sylvatica*, one of the most beautiful of all the British plants; *Lonicera periclymenum*, var. *quercifolium*, and *Viburnum Opulus*, and *Paris quadrifolia*. Likewise the uncommon *Allium carinatum*; this is also found among the rocks; it is of rare occurrence in other parts of Britain. Besides these occur the *Allium ursinum*, *Adoxa Moschatellina*, *Melampyrum sylvaticum* and *pratense*, *Chrysosplenium alternifolium*, *Lysimachia nemorum*, *Campanula latifolia*, *Satyrium repens*, and *Equisetum hyemale*. This last is the plant brought from Holland for polishing wood, and sold to cabinet-makers under the name of *rushes*. There are, further, some rare cryptogamous plants, among which are the following: In the fir woods near Forfar, is the *Dicranum undulatum* and *Hypnum crista-castrensis*, not found any where else in Britain. And in the order *Fungi*, is *Hydnus auriscalpium*, *repandum*, *sublamellosum* and *imbricatum*, *Helvella caryophyllaea*, *Agaricus cinnamomeus*, *elephantinus*, and *deliciosus*; together with the very poisonous one called by Linnæus *A. muscarius*, and its var. *verrucosus*, with many others. As cattle sometimes eat these, it is possible that they may bring on disease. The singular fungus called *Phallus impudicus*, occasionally appears. *Helvella spathulata* and *Clavaria militaris* are to be found in General Hunter's woods at Burnside, besides a great many others. I may also add the *Boletus perennis*, *versicolor*, *abietinus*, *suberosus*, and *igniarius*: the latter is called *touchwood*, being used for tinder. Also the *Riccia fruticulosa*, with *Jungermannia scalaris*, *albicans*, *ovata* *trichomanes*, and *excisa*.

When the botanist traverses the marshes, and examines the lakes, he will find his trouble amply repaid. In the lakes of

Forfar, Rescobie, and Balgavies, he will meet with the *Typha latifolia*; this is also in a rivulet not far from Pitmues, by the side of the turnpike-road that leads from Forfar to Arbroath. In the lakes of Rescobie and Balgavies, are likewise to be found *Nymphaea lutea* and *alba*, and *Ceratophyllum demersum*; and on their margins *Lysimachia thyrsiflora*: the latter plant, though rare in other parts of Britain, is not uncommon in Angusshire. *Potamogeton perfoliatum*, *lucens*, *crispum*, *pectinatum*, *compressum*, *gramineum*, *pusillum*, likewise occur in these lakes. *Cicuta virosa*, which is one of the most virulent of all the vegetable poisons, grows on their margins. Cattle, when allowed to browse by the sides of the lakes in the winter months, are sometimes deceived, by its smell being very weak at that season; and when once they have eaten it, it generally proves fatal in two or three hours. The late Mr. Dickson of Cloak's-bridge lost three cows in one afternoon by this plant. When the summer is a little advanced, the odour of the plant warns the cattle, and then they carefully avoid it. The *Scirpus lacustris*, the well known rush, so much used for making rush-bottomed chairs, is common; and in the lake called Loch Feithie, is to be found the *Isoetes lacustris*, generally supposed only to be found in alpine lakes. In the lake at Forfar is the *Stratiotes aloides*, which I brought from a great distance, and introduced there about the year 1792: it is now (1811) in great abundance. *Lemna trisulca* is frequent. *Hippuris vulgaris* is also very common; the latter being somewhat interesting to the botanist, as it belongs to the *Monandria*, or first class of the Linnean system, there being only four other plants indigenous to Britain that belong to that class. At the east end of the Lake of Forfar, in small pools, is to be found the *Utricularia vulgaris* and *minor*, both beautiful plants, and rather of rare occurrence: likewise *Sparganium natans* and *simplex*, *Veronica anagallis*, *Chara hispida* and var. β , and *Ranunculus Lingua*.

In the lake called the Loch of Lintrathen, the beautiful *Lobelia Dortmanna* is in abundance; and the rare *Potamogeton lanceolatum*, only of late known to be indigenous to Britain.

In the marshes are to be found the *Scirpus pauciflorus*, *acicularis*, *sylvaticus*, and *fluitans*; with the beautiful *Parnassia palustris*, so much taken notice of by botanists, on account of its singular nectary, which is figured in every elementary book. The following also occur:

<i>Poa aquatica</i> ; but not common	<i>Galium Witheringii</i>
<i>Carex stricta</i>	<i>uliginosum</i>
" <i>paludosa</i>	<i>Littorella lacustris</i>
" <i>Micheliana</i>	<i>Centunculus minimus</i>
" <i>Oederi</i>	occurs, but is rare
" <i>limosa</i>	<i>Radiola millegrana</i>
" <i>paniculata</i>	<i>Viola palustris</i>
" <i>teretiuscula</i>	<i>Drosera rotundifolia</i>
" <i>intermedia</i>	<i>Alisma ranunculoides</i>
" <i>curta</i>	<i>Peplis portula</i>
<i>Scutellaria galericulata</i>	<i>Vaccinium oxyccoccus</i> , or cranberry, the fruit of
<i>Eriophorum vaginatum</i>	which is brought in
<i>Pilularia globulifera</i>	quantity from the north
<i>Hydrocotyle vulgaris</i>	of Europe, and used for
" <i>inundata</i>	making tarts

In the Moss of Restennet formerly grew the *Schoenus mariscus*, the only place I have seen it in Angusshire; but it is now entirely lost there. The *Chara hispida* grows in pools in the same moss; and there I discovered, in 1791, that truly rare and beautiful grass, the *Eriophorum alpinum*, the first and only time it has been found in Great Britain. I am sorry, therefore, to say, it has been extinct there for these several years past, and that at present we know of no British habitat for it: it is found on the mountainous heaths of Germany, Denmark, Sweden and Norway.

In the marsh called the White Mire, near Forfar, I discovered in 1807 the *Arundo stricta* of Schræder's F. Germ., and the *Arundo neglecta* of Ehrart, being the only place where it has been found in Britain; but I am sorry to say it will be soon entirely lost, by the draining of the marsh. This reed produces a great quantity of foliage, and might prove a grass of considerable utility to the farmer in marshy grounds; it is much more promising in its appearance than the rest of the reed family. There is also the *Eriophorum polystachion*, the only place I have seen it in Angusshire; and the *Carex filiformis* and *Galium Witheringii*. In the ditches are the *Potamogeton fluitans* and *heterophyllum*, both only of late years known to be natives of Britain; and in the marshes grows also the *Saxifraga aizoides*.

Some rare mosses also occur, among which are the following:

<i>Polytrichum aloides</i>	<i>Bryum ventricosum</i>
" <i>gracile</i>	<i>„ turbinatum</i>
" <i>attenuatum</i>	<i>„ sericeum</i>
" <i>nanum</i>	<i>„ hornum</i>
<i>Bryum dealbatum</i>	<i>„ bimum</i>

<i>Bryum compactum</i>	<i>Hypnum dendroides.</i> This
<i>Dicranum heteromallum</i>	is every year to
" <i>strictum</i>	be found with
" <i>glaucum</i>	fruit near
" <i>pellucidum</i>	Forfar, though
" <i>adiantoides</i>	the fruit is
" <i>flexuosum</i> , var.	accounted rare
<i>fragile</i>	" <i>scorpioides</i>
" <i>osmundioides</i>	" <i>molluscum</i>
<i>Hypnum stellatum</i>	" <i>commutatum</i>
" <i>revolvens</i>	" <i>rugosum</i>
" <i>cuspidatum</i>	<i>Splachnum ampullaceum</i>
" <i>cordifolium</i>	" <i>ovatum</i>
	" <i>fastigiatum</i>

In a marsh, near Colonel Kinloch's of Logie, I discovered in 1810 the *Iris xiphioides*, new to Britain: it was growing among *Carices* and *Juncus effusus* and *articulatus*, in a situation where it had never been cultivated.

In the Moss of Cassens is the *Polytrichum strictum* of the Banksian Herbarium, the same as Sir Joseph Banks had from Iceland: it is not the species described by British authors, which is probably no more than a variety of *P. commune* or *juniperinum*, as Dr. Smith informs me, who is in the possession of the Linnean Herbarium, and has access to the Banksian also.

The following is a list of the more remarkable plants to be found in the low parts of Angusshire.

<i>Ligustrum vulgare</i> ; near	<i>Poa alpina</i> ; by the side of
Tannadice	the rivers Esk and
<i>Ciræa alpina</i> ; and var. β	Isla
<i>intermedia</i>	" <i>glaуca</i>
" <i>lutetiana</i> ; near	" <i>compressa</i>
Finhaven	<i>Briza media</i> , var. with a
<i>Veronica officinalis</i> , var. β	white panicle
of Linnæus;	<i>Festuca myurus</i>
perhaps the	<i>Bromus multiflorus</i>
allionii of	" <i>secalinus</i>
Smith	" <i>pratensis</i>
" <i>montana</i> ; on the	" <i>arvensis</i> ; but rare
banks of the	* " <i>tectorium</i>
Esk	<i>Avena strigosa</i>
<i>Salvia verbenaca</i> ; near	" <i>flavescens</i>
Dundee	" <i>pubescens</i>
<i>Valeriana locusta</i>	" <i>pratensis</i>
<i>Aira scabro-setacea</i> of	<i>Lolium temulentum</i>
Knapp's Gramina	" <i>arvense</i>
Britannica	<i>Galium erectum</i>

<i>Galium mollugo</i>		<i>Symphytum officinale</i> ; and
" boreale		var. <i>fl. rubro</i>
" verrucosum of		<i>tuberosum</i>
Smith's <i>Pro-</i>		<i>Primula elatior</i> ; near Glam-
<i>dromus Floræ</i>		mis
<i>Græcæ</i> ; new to		<i>Anagallis arvensis</i>
<i>Britain</i>		<i>Convolvulus arvensis</i> ; com-
" spurium ; near		mon near
<i>Forfar</i> : it has		Dundee
been found in no		<i>sepium</i>
other place in		<i>Campanula glomerata</i>
<i>Scotland</i>		<i>Viola hirta</i>
I have also found		" <i>odorata</i>
another species		" <i>lutea</i>
of <i>Galium</i> near		<i>Verbascum Thapsus</i> ; and
<i>Kinnaird</i> , which		var. <i>flore albo</i> ; the latter
seems a non-de-		near <i>Airly Castle</i>
script, coming		<i>Atropa belladonna</i> ; this is
near the <i>Galium</i>		to be found in the <i>Den of</i>
<i>Austriacum</i> of		<i>Bonnetown</i> , near <i>Mon-</i>
<i>Jacquin's Flora</i>		<i>trose</i> : it is one of our
<i>Austriaca</i>		strongest vegetable
<i>Cuscuta Europæa</i> ; gene-		poisons. Its beautiful
rally on flax, and seems a		shining black berries,
very destructive weed;		about the size of a small
it mats it altogether like		cherry, and not disagree-
a parcel of matted hair		able to the taste, often
<i>Sagina apetala</i> ; but rare		allure children and
in <i>Angusshire</i> , though		unwary people to eat
common in some other		them, and they sometimes
parts of <i>Scotland</i>		prove fatal. Dr. Smith
<i>Lithospermum officinale</i>		assures us, that when it
" <i>arvense</i> , seems to		has been for any length of
be brought		time in the stomach, it is
along with the		impossible to save the
seed of wheat,		unhappy patient from
as it is become		falling a victim, as no
very common		antidote is yet known; he
of late years,		adds, that all acids and
since the		alkalies, milk and oils, are
culture of		alike ineffectual, as it
wheat became		makes its principal attack
more general		on the nervous system
<i>Anchusa sempervirens</i>		<i>Solanum Dulcamara</i>
<i>Cynoglossum officinale</i> ; but		<i>Chironia centaurium</i> ; to the
chiefly near		west of <i>Dundee</i>
to the sea		<i>Chenopodium murale</i> ; rare
" <i>sylvaticum</i> ;		" <i>Bonus-</i>
west from		<i>Henricus</i>
<i>Dundee</i> ,		" <i>polysper-</i>
rare		<i>mum</i> ; rare

<i>Ulmus montana</i>	<i>Tulipa sylvestris</i> ; not far from Brechin
" <i>campestris</i>	
<i>Gentiana amarella</i>	<i>Convallaria majalis</i> ; near Inchewen, parish of Tannadice
" <i>campestris</i>	
<i>Daucus Carota</i>	<i>Juncus glaucus</i>
<i>Oenanthe fistulosa</i> ; to the west of Dundee	<i>Rumex sanguineus</i>
<i>Scandix odorata</i> ; but always near houses	" <i>palustris</i>
" <i>pecten Veneris</i>	" <i>acutus</i>
" <i>anthriscus</i> ; but rare	<i>Trientalis europaea</i>
<i>Chærophyllum temulum</i> ;	<i>Epilobium angustifolium</i>
but rare	" <i>hirsutum</i> ; but rare
* " <i>aureum</i> . I dis- covered this plant some years ago by the side of corn fields between Arbroath and Montrose; it was till then unknown to be a native of Great Britain	<i>Vaccinium Vitis-Idaea</i>
" " aromaticum. I discovered this plant in summer 1810, by the side of the river called Lunan and Vennie, not far from Guthrie, in a truly wild state; new to Britain	<i>Polygonum Bistorta</i>
<i>Carum Carui</i> . The most common umbelliferous plant near Arbroath: there is no doubt of the plant being indigenous there	" <i>viviparum</i>
<i>Pimpinella saxifraga</i> ; and also var. β <i>dissecta</i>	" <i>minus</i>
<i>Viburnum Opulus</i>	<i>Adoxa Moschatellina</i>
<i>Sambucus Ebulus</i>	<i>Dianthus Armeria</i> ; on fields near the seat of Charles Gray, Esq., of Carse, the only place I have seen it in Scotland: I believe, indeed, it has been found nowhere else
<i>Allium arenarium</i>	" <i>deltoides</i> . This beautiful plant grows on the north bank of the Lake of Forfar, as also on dry ground near the north-west corner of the Lake; and on banks by the sea, to the east of Arbroath
" <i>vineale</i> ; near Dundee, hard by the sea side	<i>Silene anglica</i> ; but rare
	" <i>noctiflora</i> ; in sandy corn fields near the Havens or Hains, by the sea side, the only known habitat in Scotland, where it can be reckoned truly indigenous

Stellaria nemorum	not far from the
Sedum Telephium	Loups of
" villosum	Kenny, near
" album; and	Airly Castle,
" reflexum; both on	but very rare;
roofs of houses in	but common on
Forfar	rocks on Seed-
" anglicum; on rocks	lay Hills
near Dundee	
Lychnis Flos-Cuculi, flore	Potentilla reptans; near
albo	Arbroath, rare
" Viscaria, and var.	" verna; on rocks
flore albo; on	near Dundee
dry banks near	
Airly Castle	
Cerastium tetrandrum; on	Geum rivale, var. β of Flora
roofs of houses	Brit. the Geum inter-
in Forfar;	medium of Withering;
common on	certainly a distinct species
the sea coast	
" arvense	Comarum palustre var. β
" aquaticum; near	Aquilegia vulgaris
Dundee, but	Thalictrum minus; in sandy
rare	stony places in the high
*Spergula maxima; <i>nova</i>	lands, and by the sea side
<i>species</i>	
subulata	Ranunculus auricomus
Sempervivum tectorum; on	bulbosus, flore
house-tops	pleno. I
Prunus Padus	found this on
" domestica; hedges	the south
" insititia	bank of the
Pyrus communis	Lake of
" Malus; both in	Forfar
hedges near	" acris, flore
Glaumis	pleno; in
Spiraea salicifolia	meadows;
Rosa tomentosa	this variety
" scabriuscula	rare
" collina	Caltha radicans. I found
" caesia	this about the year 1790,
Rubus saxatilis	in a ditch that runs from
" corylifolius	the farmhouse called Hal-
And a new species.	toun, on the estate of
It grows near the	Charles Gray, Esq., of
waterfal called the	Carse. Considering it as
Reeky Linn, on	a var. of C. palustre, I
the water of Isla	sent it afterwards to
Potentilla argentea. I ob-	London, where it was
served this	ascertained to be a
plant on rocks	distinct species
	Teucrium Chamædrys; but
	always near houses
	Lamium nova species, which
	I propose to call <i>inter-</i>
	<i>medium</i> : it is perfectly

distinct from all the known species: in cultivated fields

Galeopsis versicolor

Origanum vulgare, and likewise var. *flore albo*

Thymus Acinos; near the village called Welltown, about one mile south of Forfar

Scrophularia vernalis; near Lower

Myagrum sativum; by some botanists called

" *Alyssum sativum*

" *orientale*; in corn fields, and along with the other among flax. These two plants belong to the genus *Alyssum*, on account of their inflated and many-seeded silicles. New to Britain

" *paniculatum*; near the village of Crichie: I discovered it there several years ago; it has never been met with any where else in Britain. This is a true *myagrum*, and not an *alyssum*

Thlaspi arvense; in corn fields, but rare, as near Brechin and Arbroath

" *campestre*

" *hirtum*, var. with smooth silicles, according to Dr.

Smith. See *Flora Britannica*. There is little doubt, however, of this being a distinct species, and not a mere variety; it is very distinct in its appearance and in its silicles, which are of a different form. I have cultivated both varieties for several years past, and am convinced they are permanently distinct. Grows opposite to a mill on the south side of the river Esk, near Kinnaird

Iberis nudicaulis. This beautiful little plant grows on the estate of Pitruchie, about one mile south of Forfar; it is of rare occurrence in Scotland

Cardamine amara; in dens by the sides of rivulets

Sisymbrium terestre

" *Sophia*; near the confines of Angus-shire, on the Perth road

Cheiranthus fruticosus adorns the ruins of several ancient buildings; such as the Abbey of Arbroath, and one near the Baikie; also on rocks by the sea shore

Hesperis inodora; on banks near Airly Castle

Turritis glabra; near Kinnaird

" *hirsuta*; on rocks and dry banks

**Turritis* nov. sp.; near Lochlee, in Glen Esk, growing on rocks. I observed it in 1801. Having shewn specimens to Mr. J. T. Mackay of Dublin, when he paid me a visit at Forfar in 1811, he recognised it as the same which he had found in Ireland, and which Dr. Smith has considered as *T. alpina*, Lin.

Brassica campestris; corn fields near Forfar

Geranium sylvaticum, var. *flore albo*
" *pusillum*
" *sanguineum*

Fumaria capreolata
" *clavicularia*

Genista anglica

Ulex nanus

Orobus tenuifolius of Roth; near Kinnaird

Ornithopus perpusillus; near Newtyle, but rare

Astragalus glycyphylloides
" *hypoglossis*

Trifolium scabrum
" *striatum*
" *medium*. This last species produces a number of leaves, and as it thrives well on cold tilly pastures, unfavourable to most other vegetables, it deserves a trial, as its appearance is very

flattering, and cattle and horses are fond of it

Botus corniculatus
" *major*
" *lathyroides*; near Forfar, but rare in other places. All these three thrive well on poor soils, and in cold till, and if they were properly attended to, they would make a valuable addition to our pasture grasses. I named this latter species some years ago

Medicago sativa; near Dundee

Leontodon palustre

Hyoseris minima. There is a remarkable circumstance occurs with regard to this plant: when any muir ground is broken up, although there is no symptom of its having been ever ploughed, this plant never fails to make its appearance the first year; but after the field has been cultivated for some time, it begins to disappear

**Crepis pulchra*; among the debris of the rocks of the hills of Turin and Pitsandly, but very rare

Hypochaeris glabra
Carduus heterophyllus

" *marianus*
" *tenuiflorus*

Tanacetum vulgare
Senecio saracenicus; but always near houses

Doronicum Pardalianches; near Kinnaird

Pyrethrum Parthenium	† <i>Salix nigricans</i>
Anthemis Cotula	" <i>bicolor</i>
" <i>tinctoria</i>	" <i>petioloris</i> . This
" <i>arvensis</i>	forms a fine tree,
Centaurea Scabiosa, and	and one of our best
var. <i>flore albo</i>	hoop willows
" <i>nigra</i> , var. <i>flore</i>	" <i>vitellina</i> . A good
" <i>albo</i>	basket willow
" <i>jacea</i> ; found by	" <i>fragilis</i> . The bark is
Mr. Young	sometimes used for
near New-Tyle	tanning
Orchis conopsea	" <i>malifolia</i>
" <i>mascula</i> , var. <i>flore</i>	" <i>argentea</i>
" <i>albo</i>	" <i>fusca</i>
" <i>bifolia</i>	† " <i>cinerea</i>
" <i>latifolia</i> , var. <i>flore</i>	" <i>aurita</i>
<i>incarnato</i>	† " <i>aquatica</i>
Satyrium albidum	† " <i>oleifolia</i>
" <i>viride</i>	" <i>hirta</i>
Ophrys ovata	† " <i>caprea</i>
" <i>cordata</i>	† " <i>stipularis</i>
Malaxis paludosa	† " <i>alba</i>
Littorella lacustris	" <i>viminalis</i> . This is the
Salix purpurea	one most used for
" <i>helix</i>	hoops in this
" <i>Lambertiana</i>	country
" <i>rubra</i>	" <i>mollissima</i>
" <i>triandra</i>	Those marked thus †,
" <i>lanceolata</i> .—All these	form good trees
are good basket	
willows	
† " <i>Russelliana</i> , or Bedford willow. The	Myrica gale
bark of this species	Populus nigra
is the best adapted	" <i>tremula</i>
for tanning of any	<i>Osmunda lunaria</i>
of the willows	Anethum foeniculum; on
" <i>pentandra</i>	rocks on the foreside of
	Seedlay Hills, the only
	habitat I know for it in
	Scotland

Among the pastures in wet soils, and by the sides of rivers, a considerable number of the different species of *Equisetum*, or horse-tail, are to be met with, particularly,

Equisetum arvense

 " *palustre*

 " *sylvaticum*.—These plants are known

to be hurtful to cattle that browse upon them, probably from the rough angle of their stems acting upon the intestines and injuring them. May not this help to account for some of the diseases which prove fatal to cattle, hitherto not satisfactorily explained?

The genus *Agrostis*, or Bent-grass, is abundant. A Dr. Richardson of Ireland, has written strongly in favour of this family of grasses; but from his publications, which I have of late fallen in with, it pretty evidently appears, that this writer knows not one family of grasses from another, far less is able to distinguish the different species of each family; for his *fiorin* grass, as is evident from his own words, palpably includes every species and variety of British *agrostis*, with couchy roots, or trailing shoots; for he says that it grows in every bog or marsh, and in every soil and situation, from marshes to the tops of hills, and on heaths. How any one could suppose the *fiorin* grass to be exclusively the *Agrostis stolonifera*, I am at a loss to understand; for I had three specimens sent me from gentlemen, who had their plants from Dr. Richardson himself: one of them proved to be the *Agrostis stolonifera*, another the *Agrostis vulgaris*, and a third the *Agrostis canina*. Still more lately, I have received a dried specimen of the *Fiorin* grass, procured from Dr. Richardson's own hands, and sent me from Ireland; and this proves to be another species, viz. *Agrostis alba*. This was nothing else than I would have expected, after reading the Doctor's books. I may here observe, that I have never seen the *Agrostis stolonifera* on dry elevated pastures. Now, what is this celebrated *fiorin* grass of Dr. Richardson? It seems to be a mixture of all the tribe of couchy grasses, held equally in detestation by the farmers and their cattle; and we in Angusshire are apt to judge of the industry of the farmer, in proportion as he has eradicated these grasses, the abundance of which tends so much to depreciate the value of the ground he possesses. In the west of England, the *Agrostis stolonifera* is held in equal detestation by the farmers, and stigmatized by the name of *Black squitch*.

The agrostides are the worst to eradicate of any grasses I am acquainted with. Indeed, when they get possession of wettish clay soils, it is the next thing to impossible to get clear of them.

I am bold to say, that if these grasses, so strongly recommended by Dr. Richardson, come really to be introduced among farmers, it will prove the greatest barrier in the way of improvement to agriculture that has ever yet taken place. But when a man like Dr. Richardson, who is plainly neither a botanist nor an agriculturist, comes forward with confidence, recommends to intelligent Scots farmers to lay down their arable fields with a grass which it has been their constant study through life to eradicate, the absurdity is so great, that there is reason to hope that little harm will ensue. The agrostides are grasses that totally

destroy rye-grass about the third year after sowing: the fields then become overrun with these grasses, and nothing but necessity ever compels the cattle to eat them. Dr. Richardson adds, that he supposes that the fiorin grass possesses an antiseptic quality, which prevents it from running into putrefaction so soon as other grasses. But I can assure that gentleman, that the agrostides on this side of the Irish Channel possess no such quality; they being here as ready to run into putrefaction as any grass whatever. He likewise adds, that Irish cattle give fiorin the preference to all other grasses: Our cattle, on the contrary, give every other grass the preference to the agrostides.

In digging in dry banks, about two or two and a half feet below the surface, if the soil is good, will be found the *Lycoperdon* tuber, the truffle, or solid puff-ball, so much esteemed by people of rank in England. In trenching up my garden lately, I found several of them. In England, dogs are trained for the purpose of finding them.

PLANTS TO BE FOUND ON THE SEA SHORE.

If the botanist, in taking his tour, begins at the North Water Bridge, the first thing that will arrest his attention is the beautiful grass called *Elymus arenarius*, and along with it he will find the *Festuca rubra*, one of our best grasses; also *Triticum junceum*, *Carex arenaria*, and the *Arundo arenaria*, commonly called Seabent: this grass, although much neglected, is not destitute of utility; it is the grass which of all others possesses in an eminent degree the advantage of being furnished with strong running roots, and of growing in loose dry sand, and, by means of these roots, arresting the blowing sands so destructive in some parts of the kingdom. In some counties in England, accordingly, which have a considerable quantity of sandy sea coast, the pulling or destroying of this grass is prohibited. The botanist will also find, though sparingly, the *Phalaris arenaria*. There is also what I take to be a non-descript species of *Aira*, or else the *Aira cristata* β of Linnæus. The sandy beach is here adorned with the delicate flowers of the *Bunias cakile*, the *Cakile maritima* of Willdenow's Species Plantarum.

As the collector comes nearer to Montrose, he meets with the *Thalictrum minus*; and also the *Eryngium maritimum*, whose singular foliage seldom fails to attract the notice of every man of curiosity. In cultivated fields near Montrose, he will find the *Carduus tenuiflorus* and *Lamium incisum*, rather of rare occurrence

in Angusshire. By the road side, in coming from the North Water Bridge, he will find the *Carex divisa*, one of the rarest carices. Near what are called the Back Sands, he will at ebb-tide find plants of the *Zostera marina*; and on those sands, and in salt-marshes among them, *Chenopodium maritimum*, *Triglochin maritimum*, *Scirpus maritimus*, and a variety of *Scirpus lacustris*, *Carex distans* and *vulpina*, *Salicornia herbacea*, and two varieties, which may possibly prove distinct species; also *Arenaria marina* and *papooides*, *Poa maritima* and *Poa distans*, and *Juncus bulbosus*. I have there observed likewise the *Aster tripolium* which had a magnificent appearance, the flower-stems being eighteen inches high, and strongly resembling some of the beautiful species of that genus from North America.

As the botanical inquirer proceeds along the coast towards Arbroath, he will find the rare moss called *Grimmia maritima*, and among the rocks, he will observe the *Artemisia Gallica* and *maritima*, *Silene nutans*, *Vicia lutea*, and *Reseda lutea*; and in marshes *Schoenus rufus*; and in dens near the shore, is the rare *Allium ampeloprasum*, the only place where it is known to grow in Scotland. Near the promontory called the Red Head, on rocks, is the *Lathyrus sylvestris*, which is a rare plant; *Carlina vulgaris*, *Asplenium marinum*, and *Scolopendrum vulgare*. Near to the town called Achmuthie, is the *Asperugo procumbens*, which grows also at the village called Westhaven. Near the village called Torens-haven, is that truly beautiful plant, the *Pulmonaria maritima*, whose elegant glaucous leaves, and bright blue and purple flowers, form a fine contrast among the stones of the beach. Here also grows *Mentha hirsuta* of Linnaeus, and the *Gymnostomum obtusum*, which is a rare moss in Scotland. On the beach in several places occurs the *Salsola kali*, one of the plants employed to produce barilla. The elegant *Glaux maritima* is common in many places.

To the eastward of Arbroath, plenty of the *Allium carinatum*, and *Eryngium maritimum* are found; and the *Parietaria officinalis* is in plenty about the rocks and old buildings. The *Eupatorium cannabinum* is not uncommon. Near to Wormiehills, *Poa procumbens* appears, and also a non-descript species of *Festuca*. On the tops of houses at Wormiehills I observed plenty of the *Saxifraga tridactylites*. The *Carum carui*, known by the name of Caraway, is common, but is generally considered as a doubtful native: the botanist will, however, be fully satisfied of its being truly indigenous to this coast; it is indeed by far the most common umbelliferous plant in the neighbourhood of Arbroath; its seeds are often put into loaf-

bread and also among the oatmeal baked into cakes by the peasants; they are also sometimes used for giving a flavour to cheeses. The *Scabiosa columbaria* is plentiful; and the beautiful *Convolvulus soldanella*, whose large rose-coloured flowers makes a fine appearance among the arid sand, will not fail to attract the botanist's notice: this is the only place I have observed these two plants in Scotland. That elegant plant, the *Gentiana amarella*, is common; and *Erigeron acre*, *Phalaris arenaria*, *Pyrethrum maritimum*, *Chenopodium maritimum*, are not unfrequent. The beach is covered everywhere with the *Atriplex lacinata*; and around Arbroath, as well as Dundee, grows plenty of the *Hordeum murinum*.

In proceeding a little further to the westward, the tourist arrives at the Sands of Barrie, which offer an ample field for botanical pursuits. There he will find most of the coast-plants already taken notice of. The *Phalaris arenaria*, and *Erigeron acre*, are there in the greatest abundance. Some years ago I observed there the *Equisetum variegatum*, new to Britain; and about the same time, I discovered a rare moss, which I take to be the *Meesia longeseta* of *Hedwig*, hitherto unnoticed in Britain: this moss is easily distinguished, from the great length of its pedicles. I have likewise observed on the down, the *Grimmia nigrita* and *Grimmia inclinata*, both rare mosses. *Carex incurva*, and *Ophioglossum vulgatum*, occur here; and this is the only place where I have observed them in Angusshire. A very singular variety of the *Gentiana campestris*, without any flower-stem, is found here. *Sagina maritima* may also be added to the list of Barry rarities; it is a rare species, which I first observed in the Isle of Skye, and on the summit of Bennevis, in 1794.

As the botanist approaches to Broughty Castle, he will observe the *Sedum villosum* and *Sedum anglicum*, the former by no means common in Angusshire; and the *Trifolium ornithopodioides*, a rare plant in Scotland; and between Broughty Castle and Dundee, on the rocks, he will notice the *Spirea filipendula*, and *Potentilla verna*, being the only place I have observed them in Angusshire; together with the *Carduus Marianus*, and a variety with green leaves: *Grimmia maritima*, and *Asplenium ruta muraria*, occur on the same rocks. By the sea side, in marshes, he will find, though sparingly, *Oenanthe crocata*, or hemlock dropwort: this is a strong vegetable poison; several instances are on record of its fatal effects; its roots consist of small round tubers, in bundles, like skirrets, and children and the unwaried sometimes take them for the roots of the *Bunium*

flexuosum, the earth nuts or earth chesnuts, in Scotland called by the name of *Arnots*.

In the fields by the shore, in several places, is found the *Centaurea intybacea* of Willdenow's Species Plantarum. I first distinguished this beautiful and rare plant some years ago: it is new to Britain, and must have been confounded with the *Centaurea scabiosa*, which it very much resembles, and often grows intermixed with. On walls about Dundee is found a variety of *Poa compressa*. On the walls of the old Tower of Dundee, is plenty of the *Asplenium ruta-muraria*, the only place where this little plant is to be found in plenty in Angusshire.

Along the side of the Tay, to the westward of Dundee, may be seen the *Sagina maritima*, *Allium viniale*, *Triglochin maritimum*, *Aster tripolium*, *Poa maritima*, and a new species, which I propose to call *Poa depauperata*, from its starved-like appearance. There likewise grows on the banks of the Tay an uncommon species of *Aira*, which may perhaps prove to be a non-descript. In the woods, *Paris quadrifolia* occurs; and on rocks we find *Asplenium septentrionale*. *Saxifraga nivalis* grows on the higher hills, and should have been formerly mentioned.

The larger plants contained in this List are to be seen in a growing state in my Botanic Garden at Forfar, where I have now the most extensive collection of hardy plants in Scotland.

SEA PRODUCTIONS.

The first to be noticed is the genus *Fucus*, not only on account of the great number of species, but because they are the most conspicuous marine plants, and those generally understood by the term Sea-weeds. The following is a list of such as I have observed in the course of my botanical excursions along the shore:

<i>Fucus sinuosus</i>		<i>Fucus alatus</i>
", <i>sanguineus</i>		", <i>dentatus</i>
", <i>ruscifolius</i>		", <i>laceratus</i>
", <i>membranifolius</i>		", <i>laciniatus</i>
", <i>ovalis</i>		", <i>ciliatus</i>
", <i>siliquosus</i>		", <i>bifidus</i>
", <i>ligulatus</i>		", <i>palmatus</i> ; the <i>dulse</i>
", <i>esculentus</i> ; <i>hen-ware</i>	of Angusshire	" of this country
", <i>serratus</i>		", <i>edulis</i>
", <i>vesiculosus</i> ; and var.		", <i>phyllitis</i>
", <i>spiralis</i>		", <i>saccharinus</i>
", <i>cerinoides</i>		", <i>digitatus</i>
		", <i>bulbosus</i>

Fucus rubens	Fucus confervoides
" crispus	" flagelliformis
" mamillosus	" filum
" canaliculatus	" lycopodioides
" loreus	" subfuscus
" nodosus	" purpurascens
" pygmæus	" califormis
" aculeatus	" articulatus
" coccineus	" opuntia
" plumosus	" amphibius
" rotundus	" hypoglossum
" lumbricalis	" pinnatifidus
" plicatus	

The following species of *Ulva* occur:

Ulva purpurascens	Ulva laciniata
" latissima	" linza
" lactuca	" umbilicalis
" compressa	" fistulosa
" lanceolata	" intestinalis

Of the genus *Conferva*, many species are found, a few of which may be named:

Conferva polymorpha	Conferva verticillata
" pilosa	" capillaris
" rubra	" funicula
" comoides	" elongata
" rupestris	" nodulosa
" glomerata	" diaphana
" confervicula	" fucoides
" littoralis	" coccinea
" aeruginosa	" villosa
" scoparia	" repens
" purpurea	" atro-rubescens

The following species are also to be met with in fresh water, and on damp walls, or on the ground:

Conferva velutina	Conferva amphibia
" atro-virens	" ocracea
" fracta	" sordida
" gelatinosa	" lucens
" atra	" decorticans
" fluviatilis	" limosa
" purpurea	" fontinalis
" aurea	" nitida
" rubiginosa	" rivularis
" frigida	" muralis
" flexuosa	

This latter species grow on damp walls in crowded cities, and sends forth a fragrant smell. Dr. Smith thinks it may have a tendency to correct the bad air in such places; it colours the wall of a green colour, but its filaments are so fine as hardly to be seen with the naked eye.

The marine plants, although many of them are extremely beautiful, are neglected or overlooked by the greater part of mankind; yet they most certainly are highly useful in the economy of Nature, although we may be ignorant of their uses. We evidently see that they give shelter to many of the smaller tribes of marine animals, and a number of others are spawned upon them, and receive from them their nourishment during the first stages of life. Others, again, seem to depend almost entirely upon them for nourishment, as they are attached to them through life: Such, for instance, is the *Lepas striata*, some of the genus *Serpula*, and some of the *Zoophyta*, as the *Flustra*, *Sertularia*, &c. The beautiful *Patella pellucida* I have often observed on the larger species of fuci; the animal that inhabits that shell seems to derive a great part of its nourishment from that tribe of vegetables. The following are esculent, viz. the *Fucus palmatus*, known by the name of *dulse* or *dilse*: The *crispus* and *mamillosus* are eaten among it: the *F. pinnatifidus*, known by the name of *pepper-dulse*: the *F. esculentus*, which is known by the name of *hen-ware* on the Angusshire coast: *F. edulis*, which is eaten promiscuously along with *F. palmatus*; and the stems of the *F. digitatus* and *F. saccharinus*, which are sold under the name of *tang* or *tangle*. Many of the fuci are eaten by cattle; and the whole of them are known to make excellent manure.

In some parts of Scotland, where they are extremely abundant on the shores, they are manufactured into kelp. The *F. vesiculosus*, *nodosus*, and *serratus* are principally used for that purpose; and on that account, Dr. Garnet, in his Tour through the Highlands, informs us, that in the Isle of Mull, some small farms which a very few years ago were let for L. 40 are, now let for L. 300 *per annum*.

The *F. vesiculosus* is strongly recommended by Dr. Russell in diseases of the glands. He says it is extremely serviceable in dispersing all scorbutic and scrofulous swellings. He recommends rubbing these with the vesicles, bruised in the hand till the mucus has thoroughly penetrated the parts, and afterwards washing the parts with sea water. He also says that scirrhosities in the mammae have sometimes been dispelled by this treatment.

The many *Confervæ* growing in stagnated pools and ditches, give out a great deal of oxygenous air from their extremities, and hence tend to prevent putrescence in the waters during the summer months; and it is probable that the numerous *Fuci*, *Confervæ* and *Ulvae*, are placed by the hand of Providence in the deep, in order to assist in preventing that vast collection of water from becoming putrid.

I shall conclude my observations on these tribes of vegetables, with the words of the celebrated Mr. Turner of Yarmouth, who has written a *Synopsis* of the British *Fuci*, and is publishing a more extensive work, with highly finished figures of all of them. "I can assure the philosophic naturalist (he says), that while the more stupendous works of the Divine Hand arrest the attention of even the most careless observer, and in a language equally understood by all ages and all nations, declare the glory of God; these humble vegetables will, by the inquisitive mind, be found by no means wanting in affording additional proofs, both of the wisdom and beneficence of the Great Creator."

Having thus taken notice of the vegetables which are to be found in Angusshire, and such as are natives of the sea which washes it, or are thrown occasionally on the shore, (at least such of them as have fallen under my observation), I shall next take notice of the *Zoophyta*, which are the connecting link between the vegetable and animal kingdom. The chief of these are :

<i>Sertularia</i> <i>thuja</i>		<i>Sertularia</i> <i>muricata</i>
" <i>halecinæ</i>		" <i>uva</i>
" <i>loricata</i>		" <i>myriophyllum</i> .
" <i>pumila</i>		Of this I have
" <i>operculata</i>		only found one
" <i>geniculata</i>		specimen on
" <i>lendigera</i>		this coast
" <i>falcata</i>		<i>dichotoma</i>
" <i>eburnea</i>		" <i>setacea</i>
" <i>rosacea</i>		" <i>spinosa</i>
" <i>tamarisca</i>		" <i>polyzonias</i>
" <i>abietina</i>		" <i>fastigiata</i>
" <i>cupressina</i>		" <i>syringa</i>
" <i>argentea</i>		" <i>avicularia</i>
" <i>rugosa</i>		" <i>scruposa</i>
" <i>pluma</i>		" <i>reptans</i>
" <i>antennina</i>		" <i>frutescens</i>
" <i>volubilis</i>		<i>Pennatula</i> <i>phosphorea</i>
" <i>cuscuta</i>		<i>Corallina</i> <i>officinalis</i>
" <i>filicula</i>		" <i>elongata</i>

Corallina rubens	near Forfar. I
Tubularia ramosa	have observed it
" indivisa	in the Lake of
" muscoides	Rescobie, and
" fistulosa	also near Brig-
Cellepora pumicosa	town
Millepora foliacea	Flustra foliacea
" polymorpha	" truncata
Alcyonium digitatum;	" pilosa
called <i>dead</i>	" chartacea
<i>mens' toes</i>	" carbasea
" schlosseri	" dentata
" gelatinosum.	" bullata
This, by some	" membranacea
authors, is	Hydra viridis, and
made an <i>Ulva</i>	" grisea; the common
<i>ascidioides</i>	<i>polypi</i> . These
Spongia tomentosa	two species are to
" stuposa	be found in
" oculata	ditches in the
" palmata	neighbourhood of
" lacustris. This is	Forfar
not unfrequent	

Of the order *Infusoria*, among many, the following may be noticed :

Vorticella rotatoria	is called the Dam
Trichoda cometa	at Forfar: it is
Paramecium aurelia	only visible to the
Cyclidium glaucoma	naked eye when
Librio aceti	the sun shines,
Veucophra fluida	and then the
Volvox globator. This	water seems
animal is remark-	tinged of a green
ably common in	colour with these
the summer	minute animals
months in the old	
tan-pits near what	
Monas lens	
Enchelis seminulum	

It is scarcely necessary to mention, that the animals belonging to this order for the most part require a microscope to detect them, being so small as to elude the naked eye.

MAMMALIA.

Of the *Mammalia* class we have no animals of the order *Primates*, but two, viz.

Vespertilio auritus; eared bat

Vespertilio murinus; common bat

Of the order *Fera*, we have the following:

Phoca vitulina ; common seal	was upwards of thirty years ago
” barbata ; great seal	
Mustela lutra ; common otter : is not unfrequent on the banks of some of the rivers	Mustela vulgaris ; common weasel, or <i>Whitret</i> ; not unfrequent
” foina ; common martin. This is rather a rare animal in Scotland ; one of them was shot in the Wood-hill of Glammis in the year 1808	Ursus meles ; the badger, or <i>Brock</i> , is rather rare in Angusshire
” putorius ; <i>foumart</i> , or polecat	Talpa europea ; common mole. I have seen a beautiful variety of a pure white colour, and another variety of a dun colour : both varieties may be considered as of rare occurrence
” erminea. This animal is rare in Angusshire : I never saw but one, which was near the Mill of Brathens, about four miles north of Brechin ; this	Erinaceus europaeus ; hedgehog. This animal was formerly rare in Angusshire, but of late years it has appeared in tolerable plenty

Of the Order *Glires*, we have the following:

Mus rattus ; the black rat. This is the only species I have seen in the town of Forfar, and it is not rare in all the inland parts of Angushire ; but it has become very rare in most parts of Britain, and is still becoming scarcer, as the brown rat has nearly extirpated it in many parts of the island	sea-port towns in Angusshire ; a very destructive animal
” decumanus ; brown rat, or Norway rat. Common in the	Mus musculus ; common mouse. I have seen a variety of this of a pure white colour
	” sylvaticus ; field mouse.
	” amphibius ; water rat ; common
	” agrestis ; short-tailed field mouse. I have seen this species in my garden in Forfar : the female seem very much attached to her young, and will brave

every danger in
order to protect them
Lepus variabilis; alpine or
white hare.
Mountains of
Clova: it is not

near so timid as
the common hare
Lepus cuniculus; rabbit; it
is rare in Angus-
shire; perhaps
hardly a native

Of the Order *Pecora*, we possess but three species belonging to one genus:

Cervus elaphus; the stag:
sometimes to be
found on Clova
mountains, but
rare; and in the
wood of the
Forest Muir, near
Forfar
" dama; fallow deer:
it is rare in a
wild state in
Angusshire, but
is in a tamed
state at Kinnaird
and Panmure

Cervus capreolus; the
roe-buck: some-
times to be found
in the woods near
Forfar. I have
seen two or three
of them in these
woods some
years ago: I have
also seen them
on the Seedlay
Hills, and in the
woods around
Glammis

Of the Order *Cete*, we occasionally find the following:

Balaena mysticetus; com-
mon whale;
sometimes on the
coast
" physalus; the fin-
fish. I observed
a skeleton of this

species to the
east of Dundee
two years ago
Delphinus phocæna; the
porpesse
" delphis; the
dolphin

As to the whales that were stranded up the Frith of Tay, I can-
not positively say what species they belonged to, as I had no
opportunity of seeing them. From the description given of them,
they appear to have been of the kind first distinguished by
Mr. P. Neill, (in his Tour to Orkney), by the name of *Ca'ing whale*,
and afterwards figured and described by Dr. Traill of Liverpool,
(in Nicolson's Journal), under the title of *Delphinus melas*.

BIRDS,

The *Ornithology* of Angusshire might furnish materials for a
volume. I shall, however, very much compress my remarks on the
subject.

Of the Order *Accipitres*, we find a considerable number:

Falco albicilla; the *erne*: on the mountains of Clova, and by the head of the West water: there is a rock near the head of it called the *Erne skellie*, where these birds generally breed

" *ossifragus*; the sea eagle, is to be seen sometimes on the coast

" *chrysaëtos*; golden eagle: mountains about the head of Clova

" *fulvus*; ring-tailed eagle. I observed one of these on Wirron Hill, about twelve miles north from Brechin in 1797

" *milvus*; the kite, or *Gled*

" *ater*; black eagle: on heaths and low hills

" *buteo*; the buzzard. In a nest of one of these birds in the wood at Newmill, belonging to Colonel Kinloch, on breaking an egg, the bird contained in it had two heads

" *apivorus*; honey buzzard

" *æruginosus*; moor buzzard: on heaths. I have seen this species on the hills of Turin and Pitscandy

Falco palumbarius; the gosshawk. This bird is not very common in Angus-shire

" *gentilis*; gentle falcon: on our high mountains

" *peregrinus*; peregrine falcon. I remember of seeing one of this species in the possession of the Laird of Balnamoon's grandfather, and of his servants hunting with it about the year 1771. It is recorded of one of this species that eloped from its master in the vicinity of Forfar, on the 24th of October 1772, with four heavy bells on its feet, that it was killed on the morning of the 26th at Mostyn in Flintshire. This shews the great rapidity of its flight

" *candicans*; gyr-falcon. I observed one of this species on the estate of Mr. Robertson Scott of Hedderwick in September 1810; but I rather think it is rare

" *cyaneus*; hen-harrier. I have seen this species several times in the neighbourhood of Forfar

Falco pygargus ; the ring-tail : not unfrequent
 " tinnunculus ; the kestrel. This species is called often in Angus-shire, by the country people, *Willie whip the wind*
 " nisus ; the sparrow-hawk : not unfrequent
 " subbuteo ; the hobby : it is rather rare

Strix otus ; horned owl
 " brachyotus ; short-eared owl : on the mountains of Angusshire
 " flammea ; white owl : common
 " ulula. I saw this species in the woods at Balnamoon, where they used to hatch every season
 Lanius rufus ; wood-chat

Of the Order *Picæ*, there occur the following :

Corvus corax ; the raven : on the mountains
 " corone ; carrion crow
 " frugilegus ; the rook : common
 " cornix ; the hooded crow. These birds were much more common some years ago than they are now
 " monedula ; the jackdaw
 " glandarius ; the jay. Within these few years they have frequented the woods about Forfar, but formerly they were not to be seen : they are common about the woods of Glammis, Brig-town, and Kinnettles
 " pica ; the magpie

Corvus graculus ; the Cornish chough : on the mountains of Clova
 Cuculus canorus ; cuckoo
 Picus viridis ; green wood-pecker
 " medius ; middle spotted wood-pecker
 " minor ; lesser spotted wood-pecker
 Sitta europæa ; nut-hatch. One of this was brought me from the woods near Tannadice in 1807
 Alcedo ispida ; the common king's-fisher. This beautiful bird is sometimes seen in the wood of Glammis and in the wood of Newmill
 Certhia familiaris ; creeper. I have seen this bird among the woods by the side of the water of Esk

Of the *Anseres*, we can boast a considerable number:

Anas cygnus; wild swan.	Anas glacialis; long-tailed duck: on the coast
A few pairs of these visit the lakes in the neighbourhood of Forfar; at least I have observed them in 1809 and 1810: they are often to be seen in the lake called the Loch of the Garth, between Forfar and Kirriemuir	“ ferina; the pochard: this is rare
” olor; tame swan: they are occasionally kept by gentlemen: two of them were long kept in a lake called Loch Feithie, by George Dempster, Esq. of Dunnichen	“ querquedula; the garganay, or summer teal: in the lake of Forfar
” tadorna; shieldrake: not unfrequent in the winter season near the river Esk	“ crecca; teal duck: lake of Forfar
” fusca; velvet duck: sometimes to be seen on our coast	“ boschas; wild duck
” anser; wild goose	“ fuligula; tufted duck: in the lakes
” segetum; bean goose	Mergus merganser; the goosander: on the coast
” bernicla; the brent goose	” serrator; red-breasted goosander: coast
” mollissima; eider duck, or <i>Dunder</i>	Alca arctica; puffin: on the shore
” clypeata; shoveler	” torda; razor-bill: on the coast
” streptera; the gadwall, or grey. I have seen this species in the lakes of Rescobie and Balgavies	Procellaria pelagica; stormy petrel, called by the sailors <i>Mother Carey's chicken</i>
” clangula; the golden-eyed duck	Pelecanus carbo; the corvorant, or scart: some of these birds occasionally visit the lake of Forfar, and sometimes sit for a whole day on the stakes driven into the lake for dragging marl
” penelope; the wigeon: in the lakes of Rescobie and Balgavies	” graculus; the shag: on the coast
	” bassanus; the gannet, or <i>Solon goose</i> . This is sometimes to be

Colymbus grylle ; the	seen on the coast	Larus nævius ; the wagel
" minor ; lesser	spotted guille- mot	" marinus ; black-
" ditto		" backed gull
" troile ; the scout,	or foolish	" fuscus ; the herring
" guillemot		gull. This species
" arcticus ; black-		is easily tamed :
" throated diver :	on the coast	I once kept one of
" stellatus ;		them for three
" speckled diver		years
" minor ; little		" ridibundus ; black-
" grebe. One	of these was	headed gull. In
" taken in my		Angusshire it is
" garden at		called <i>pictarny</i>
" Forfar in		" parasiticus ; the
" winter 1807		arctic gull
Larus rissa ; kittiwake		" crepiditatus ; black-
" tridactylus ; the		toed gull
" tarrock, or three-		Sterna hirundo ; the sea
" toed gull		swallow. In
" hybernum ; winter		Scotland, partic- ularly in Angus-
" gull		shire, it is called
" canus ; common gull		<i>Willie Fisher</i> :
" erythropus ; brown-		common on the
" headed gull		water of Esk
		" minuta ; the lesser
		sea swallow
		" fissipes ; the black
		tern : common on
		the sands of
		Barry *

Of the Order *Grallæ*, we have the following :

Ardea major ; common	heron. This bird
	builds on trees in
	the wood of
" stellaris ; the bittern.	Newmill
"	One of these was
	shot in the White
	Mire, near Forfar,
	in 1789 : it is
	sometimes to be
	seen in the lake of
	Rescobie, but it is
	a rare bird
Scopax arquata ; curlew :	breeds on the
	mountains

Scopax phæopus ; whim-	brel. Along
	with the curlew
" rusticola ; wood-	rusticola ; wood-
" cock	cock
" gallinago ; the	gallinago ; the
" snipe	snipe
" gallinula ; jack-	gallinula ; jack-
" snipe	snipe
" glottis ; green-	glottis ; green-
" shank : some-	shank : some-
" times on the	times on the
" coast	coast
" calidris ; red-	calidris ; red-
" shank : breeds	shank : breeds
on heaths near	on heaths near
Forfar	Forfar

Scolopax lapponica ; red godwit ; a rare bird with us	Charadrius himantopus ; long-legged plover. I once saw one bird of this species on the mountains of Clova : I have never observed but another, which was on Ben-Lawers, in Perthshire, in August 1793 : it is a rare bird, and I believe but few naturalists have seen it alive
Tringa vanellus ; the lap-wing : called in Angusshire <i>Teuchet</i> ; they are not near so numerous as they were some years ago	Hæmatopus ostralegus ; the sea-pie : frequent by the side of the Esk
„ interpres ; the turn-stone	Fulica chloropus ; common water-hen
„ cinerea ; ash-coloured sand-piper	„ atra ; common coot
„ hyperborea ; red phalarope	„ aterrima ; greater coot. The above three in the lake at Forfar
„ hypoleucus ; common sandpiper, or sand lark	Rallus crex ; the rail, or <i>Corncraik</i>
„ cinclus ; the purre islandica ; red sand-piper	„ aquaticus ; water rail
„ squatarola ; grey sandpiper	
Charadrius hiaticula ; the ringed plover	
„ pluvialis ; golden plover : breeds on the hills	

Of the *Galline* or *Grous* tribe, Forfarshire possesses,

Tetrao tetrix ; the black cock. Two of these birds were shot on Turin Hill in the winter of 1794 ; they occur also on Clova mountains, but rare	Tetrao attagen ; red grouse or <i>muirfowl</i> . This species is becoming very rare of late years, and if gentlemen do not fall upon means to prevent their destruction, they will certainly very soon become extinct. I have seen more of them
„ lagopus ; the ptarmigan : on the high mountains of Clova	

about twenty years ago in walking two or three miles, than	I have of late in walking sixty miles Tetros perdix; the partridge
Of the Order <i>Passeres</i> , a great variety occurs:	
<i>Columba oenas</i> ; common pigeon: frequent on the rocks by the sea side	<i>Ampelis garrulus</i> ; the Bohemian chatterer
" <i>palumbus</i> ; the ring-dove, or wood pigeon. This bird is easily tamed: I have one of them which for the most part lives in my house; it is so tame as to eat out of one's hand	<i>Loxia curvirostra</i> ; the cross-bill; and
<i>Alauda arvensis</i> ; the sky-lark	" <i>enucleator</i> ; pine cross-beak. These two species of <i>Loxia</i> have come in great numbers to the woods of Glammis and Lindertis, and totally destroyed the whole larch, and fir cones for these two years past
" <i>pratensis</i> ; the tit-lark	" <i>pyrrhula</i> ; the bulfinch
" <i>arborea</i> ; the wood-lark: in woods near Forfar	" <i>chloris</i> ; the green-finich. A few years ago I observed a white variety of this species near Forfar: I observed it for two winters
<i>Sturnus vulgaris</i> ; the starling: frequent on the mountains	<i>Emberiza nivalis</i> ; snow bunting, or snow flake. I once tamed one of these birds: it seemed to live very well in confinement, and was cheerful; it lived with me for four years
" <i>cinclus</i> ; water ouzel, or <i>Water crow</i>	" <i>mustellina</i> ; the tawny bunting
<i>Turdus viscivorus</i> ; the missel-thrush	
" <i>pilaris</i> ; the field-fare	
" <i>iliacus</i> ; red-wing	
" <i>musicus</i> ; the <i>mavis</i> , or throstle	
" <i>merula</i> ; blackbird	
" <i>torquatus</i> ; ring-ouzel: on the mountains	

Emberiza miliaria; common bunting	Motacilla alba; the white wagtail
" citrinella; the yellow hammer. This beautiful and innocent bird is terribly persecuted by the young children in many parts of Scotland, under the name of <i>Yellow-yile</i> , or <i>Yaldring</i>	" flava; the yellow ditto
" schoeniclus; reed bunting: common near the lake of Rescobie	" œnanthe; the wheat-ear
Fringilla cœlebs; chaffinch	" rubetra; whin-chat
" montifringilla; the brambling	" rubicola; stone-chatterer
" carduelis; the goldfinch. This bird has never been plentiful since the hard winter of 1795, which destroyed many	" atrocapilla; the black-cap
" linota; the linnet	" rubicula; the red-breast
" domestica; the sparrow	" troglodytes; the wren
" montana; mountain sparrow: on the mountains of Angus-shire	" regulus; the golden-crested wren. This is a rare bird in Angusshire
Motacilla modularis; hedge-sparrow	" trochilus; yellow wren
" salicaria; reed sparrow: among reeds by the sides of the lakes; but not common	" baarula; grey wagtail. I have seen this near Forfar
	Parus major; great tit-mouse, or <i>ox-eye</i>
	" cœruleus; the blue tit-mouse. This bird hatches in my garden every year
	" ater; the cole-mouse
	" biarmicus; the bearded tit-mouse
	Hirundo rustica; the chimney swallow
	" urbica; the martin
	" riparia; the sand martin
	" apus; the swift
	Caprimulgus europæus; the goat-sucker: woods near Forfar

AMPHIBIA.

In Angusshire we have but few of the class *Amphibia*.

Of the Order *Reptilia*, we have:

Rana bufo; the common toad
 " temporaria; common frog. I have seen numbers of a beautiful variety of this species in the alpine rivulets on the mountains of Clova: they appeared as if trimmed with silver lace. I once observed one of this variety in my garden in Forfar some years ago
 " esculenta; the eatable frog. I have seen a few of this species about the lakes, but rather rare
 " gigantea; the gigantic frog of Lightfoot. I observed one of these about five miles east of

Arbroath, in June 1797; it was about three times the size of the Rana temporaria. I suppose it is an inhabitant of salt marshes, and rare
 Lacerta palustris; the warty lizard
 " aquatica; the water ditto
 " agilis; the nimble lizard; common on the Highland mountains, where it sometimes grows to a large size
 " vulgaris; common ditto: this species, as also the others, is called in Angus-shire by the name of *Ask*

Of the *Serpentes*, there occurs only the following, and none of them are common.

Coluber berus; the viper, or *Adder*. This animal is now becoming very rare: we have it near the West Water, as at the foot of Wirron Hill, twelve miles north of Brechin, and the hills of Glenugg
 " prester; the black viper. I observed one of this species at the foot of the

rocks at the head of Lochlee, in Glenesk, in 1795, the only one I have seen
 Anguis eryx; the blue-bellied snake, or adder; on the mountains, but rare
 " fragilis; the blind-worm. Several of this species were found in the Moss of Rennet, near Forfar

Of the Order *Nantes*, the sea and rivers afford the following:

Tetronodon truncatus; the oblong sun-fish: sometimes on our coast	Raia oxyrhinchus; sharp-nosed ray
” mola; the short sun-fish: on the coast, but rare	Petromyzon marinus; the lamprey: in the sea, and sometimes in rivers
Syngnathus ophidion; the little pipe-fish	” fluvialis; lesser ditto: in lakes and rivers
” acus; the longer pipe-fish: on the coast, but very rare	” branchialis; the pride: in clear water.
Cyclopterus lumpus; the lump-fish	Lampreys were more common some years ago than at present: a number of the common people were much afraid of them, and many a strange story was told of them. They are called <i>Nine-eyed eels</i>
” liparis; the unctuous sucker	
Lophius piscatorius; the toad fish, or fishing frog, or sea devil	
Squalus canicula; the greater dog-fish	
” catulus; the lesser ditto	
” galeus; the tope	
” vulpes; the sea fox	
” acanthus; the piked dog-fish	
Raia batis; the skate	
” clavata; thornback	

FISHES.

I now proceed to give a sketch of the *Ichthyology* of Angusshire. Of the *Apodal* order, we find:

Muraena anguilla; the common eel	familiar even to the common people; they call it <i>Eve-eel</i>
” conger; conger eel; seemed to be much better known some years ago than at present: the name seems	Anarichas lupus; the sea-wolf: in Scotland called <i>Sea Cat</i> .
	Ammodytes tobianus; the sand-eel

Of the *Jugulares*, the following occur:

Callionymus lyra; the	Gadus molva; the ling
gemmeous	" mustela; five-
dragonet	bearded cod
" dracunculus;	" tricirratus; three-
sordid ditto	bearded cod
Gadus <i>æglefinus</i> ; the	brosme; the torsk
haddock	Blennius galterita; the
" morhua; the cod	crested blenny.
" luscus; the bib	One of these
" barbatus; the	was lately taken
" whiting-pout	at Acmithie, six
" minutus; the poor	miles east of
" merlangus; the	Arbroath
" whiting	pholis; smooth
" carbonarius; the	blenny
" coal-fish	" viviparus; the
" pollachius; the	viviparus
" pollack	blenny
" merlucius; the hake	

A considerable number of *Thoracici* occur, particularly

Gobius niger; the miller's	Pleuronectes limanda; the
thumb	dab
Cottus cataphractus; the	" solea; the sole
pogge	" punctatus; the
" scorpious; the father-	" whiff
lasher	" maximus; the
" gobio; the bull-head.	" turbot
This species is	Sparus auratus; the gilt-
sometimes to be	head
found in the Esk	" pagrus; the red gilt-
Zeus luna; the opah. I	head. I bought a
observed one of this	few of this species
splendid species cast	in Forfar market
ashore on the sands of	in the year 1798;
Barry	they were taken
Pleuronectes hippoglossus;	near Westhaven
the holibut.	" dentatus; toothed
This species	gilt-head
is sold in	Labrus tinca; the wrasse
Forfar by	" cornubicus; the
the name of	" goldsinny
Turbot	Perca fluviatilis; the perch
" platessa; the	" marina; the sea
plaise	perch
" flesus; the	Gasterosteus aculeatus; the
flounder	banstickle

Gasterosteus pungitius; the lesser stickle-back	Scomber trachurus; the scad, or horse mackerel
„ spinacia; the greater stickle-back. I have seen several of these on the coast	Trigla lyra; the piper „ gurnardus; the grey gurnard
Scomber scomber; the mackerel	„ cuculus; the red gurnard. I observed one of this species cast a-shore on the Sands of Barry; and they are taken frequently off Montrose
„ thynnus; the albi-core, or tunny: by some called the <i>mackrel-sture</i> , or great mackerel	

Of the Order *Abdominales*, we have the following:

Cobitis barbatula; the loche: in rivers common	taken in the Lake of Forfar of a large size; one was taken in spring 1812, 27 pounds in weight and 4 feet long
Salmo salar; the salmon	Esox belone; sea pike
„ eriox; the grey.	„ saurus; the saury pike
„ This fish is not near so common as the salmon: it is indeed rather a rare species	Mugil cephalus; the mullet
„ trutta; the sea trout	Clupea harengus; the herring
„ fario; the common trout	„ pilchardus; the pilchard
„ alpina; the char: in some of our alpine lakes, but rather rare	„ sprattus; the sprat
„ eperlanus; the smelt: in Scotland it is known by the name of <i>Sirling</i> or <i>spirling</i>	Cyprinus phoxinus; the minnow. The roach, dace, tench, or carp, which belong to this genus, and are so common in fish-ponds in England, I have never seen in Angusshire
„ thymallus; grayling	
Esox lucius; the common pike. This is often	

INSECTS.

The following are a few of the *Insects* which I have observed in this country, but they are only a few of those to be found.

Scarabæus typhæus	the Forest-mui
" nuchicornis	near Forfar
" fimetarius	
" scrutator	Dermestes lardarius
" conspurcatus	" pellio. This
" granarius	insect is
" terrestris	destructive to
" sylvaticus	books
" stercorarius ; the	domesticus
dor-beetle :	Bostricus polygraphus
When it flies	" typographus : on
in the evening	fir trees near
with a loud	Forfar
humming	" scolytus ; often
noise, it is	destructive to
thought by the	elms
country people	" piniperda ; on
to presage a	trees near
fine day	Forfar, which it
" testudinarius :	often destroys
very rare	Ptinus cerevisiae
" melolontha ; the	" mollis ; destructive
cock-chaffer :	to dried plants
flies in the	" fur ; it is a most
evening. In	destructive insect
flying it often	in museums, and
strikes against	I have often
persons and	experienced its
other objects,	mischievous
as if blind ;	effects
and hence	Hister unicolor
comes the	" æneus
common	Gyrinus natator
proverb, As	Cistela pilula
blind as a	Byrrhus scrophulariæ
beetle	Silpha vespillo
" solstitialis. This	" atrata
species is	" thoracica
often hurtful	Nitidula bi-pustulata
to the leaves	Cassida viridis
of the elm	" nobilis
" nobilis	Coccinella annulata
Lucanus parallelipipedus	" bi-punctata
" caraboides. In	" 5-punctata
the wood of	" 6-punctata
	" 7-punctata

Coccinella 9-punctata		large plantation belonging to Mr. Meason of Lindertis, consisting of the Scots fir and larch
" 13-punctata		
" 14-punctata		
" 22-punctata		
" conglobata		
" 14-guttata		
" oblongo-guttata		
" bi-pustulata		
Chrysomela graminis		
" nemorum		
" euphorbiæ		
" tabida		
" transversa		
" cardui		
" fastuosa		
" vitellinae. This species often destroys the leaves of the willow trees in my garden		
" polygoni		
" polita		
" populi		
" marginella		
" 20-punctata		
" anglica		
" aleracea		
Limnius æneus of Müller		
" Volkmarii		
" tuberculatus, Müller		
Cryptocephalus sericeus		
Auchenia asparagi		
" cyanella		
Curculio cerasi; found on the cherry and pear trees, destroying their leaves		
" granarius; a destructive insect in granaries; the weevil		
" dorsalis		
" capræ		
" ulicis		
" pomorum; hurtful to apple trees		
" pini. This species has destroyed a		
		Curculio pyri. This insect is very common on the fruit trees of the garden walls of the garden at Kinnardy, and does a considerable degree of damage
		Attelabus coryli
		Clerus formicarius
		Cerambyx bajulus. The larva of this insect perforates furniture made of fir
		" arcuatus
		" coriarius
		Leptura aquatica
		" simplex
		Lampyris noctiluca; the common glow-worm
		Cantharis viridissima
		" fusca
		" livida
		" ænea
		" bi-pustulata
		Elater sputator
		" elongatus
		" pectinicornis
		" obscurus
		Cicindela campestris
		" riparia
		Buprestis viridis
		Dytiscus marginalis
		" cinereus
		" semistriatus
		Carabus hortensis
		" catenulatus
		" ruficornis

Carabus vulgaris; and several others of this genus	Staphylinus riparius; and some others
Tenebrio molitor	Forficula auricularia; the earwig: in
Blaps mortisaga	Angusshire
Mordella bi-color	called by the country people
Staphylinus murinus	<i>Horned gollich</i>
" maxillosus	
" chrysomelinus	minor. This is
" hypnorum	rather rare

Of the *Hemiptera*, may be mentioned the following:

Blatta orientalis; found in some of the bake-houses in the seaport towns	happily not so common in the inland towns
Gryllus bi-punctatus	Cimex littoralis
" gryllotalpa	" clavicornis
" domesticus. These	" corticalis
are sometimes	" betulæ
found near	" scaraboides
bakers' ovens,	" baccarum
but rare	" juniperinus
" campestris	" prasinus
" viridissimus	" bicolor
" varius	" hyoscyami
" cæruleescens	" apterus
" stridulus	" campestris
" bi-guttulus	" pratensis
" grossus	" pini
Cicada cornuta	" urticæ
" spumaria. The	" ulmi
larva of this	" lacustris
species is the	" stagnorum
inhabitant on	" personatus: and
plants of the	some others
Cuckoo spit, or as	Aphis; a great number of
it is called in	different species
Angusshire Frog's	Chermes; a great number
spittle	of species
" viridis	Coccus ulmi
" ulmi	" pilosellæ
" rosæ; and some	" capreae
others	" salicis. These two
Notonecta glauca	latter very
striata	common on some
Nepa cinerea	of the willows in
Cimex lectularius; the bed	my garden,
bug: very common	particularly on
in some of the	the Salix vimini-
seaport towns, but	nalis and carinata

Coccus abietis.—A great many other species are to be

found in Angus-shire
Thrips physapus
" juniperina

Of the Order *Lepidoptera*, we have the following:

Papilio napi
" rapae
" brassicæ. The larvæ of these three are very destructive to cabbage plants in gardens, and render them very unsightly
" cardamine. This beautiful species I have sometimes seen in my garden at Forfar
" adusa. This beautiful and rare species I have seen in my garden: I have one preserved which was taken in it
" hyale
" hyperanthus
" pamphylius
" ægeria
" jurtina
" cardui
" urticae
" atalanta
" lucina
" paphia
" aglaja. I have one of these preserved which I found on the Sands of Barry; it is rare in Angusshire
" argus
Papilio rubi
" phæas
" linea; with several other species
Sphinx filipendulæ
" atrapos
" ligustri

Sphinx convolvuli
Phalæna bractea. This beautiful species is frequent in my garden
" viridana
" fagana
" clorana
" scabrina
" quercana
" obliquana
" rosana
" cynosbana
" nemoralis
" pallens
" pronuba
" segetis
" maura. I observed this species at Westhaven in 1807
" brassicæ
" oleracea
" citrosa
" cerosa
" euonymella
" pratella
" pascuella
" tapezella
" pellionella
" fasciella. These two latter destructive to woollen clothes
" dodecella
" cembrella
" granella
" quercus
" caja
" coryli
" erminea
" lapricpeda; and many others of this numerous family

Of the *Neuroptera*, we find a number, particularly,

Libellula quadrimaculata	species is very common about the Lake of Forfar; they live but for a single night
" vulgata	
" depressa	
" vulgatissima	
" junccea	
" puella	
" virgo. This beautiful species I have seen several times in Angusshire	
Ephemera vulgata; May-fly	Phryganea nebulosa
" vespertina	" grisea
" marginata	" flavicornis
" horaria. This	" rhombica
	" variegata; and some others
	Hemerobius lutarius
	" perla
	Panorpa communis

Of the Order *Hymenoptera*, the following are found:

Cynips rosæ	Vespa bifasciata
" glechomatis	" vaga; and others
" quercus-folii	Apis centuncularis
" quercus-petioli	" rufa
" quercus-gemmæ	" mellifica; common
" fagi	" hive bee
" viminalis	" conica
Tenthredo salicis; and several others	" annulata
Sirex gigas	" terrestris
Ichneumon. Several species of this genus are to be found	" virginalis
Sphex sabulosus	" lapidaria
" fusca	" muscorum
Vespa vulgaris; wasp	" hypnorum
" parietum	" acerorum
" muraria	Formica herculanea
" arvensis	" rufa
	" fusca
	" rubra

Of the Order *Diptera*, many species occur:

Oestrus bovis	Tipula plumosa
" equi, &c.	" motitatrix
Tipula rivosa	" littoralis
" crocata	" monilis
" oleracea	" pusilla
" hortorum	" marci
" triangularis	" febrilis
" pratensis	" vernans
" regelationis	" phalanoides
" punctata	" palustris

Musca <i>chamæleon</i>	Musca <i>hyoscyami</i>
" <i>chalybeata</i>	" <i>germinationis</i>
" <i>similis</i>	" <i>onopordinis</i>
" <i>vallata</i>	" <i>nemorum</i>
" <i>Cæsar</i>	" <i>tenax</i>
" <i>pellucens</i>	" <i>fastuosa</i>
" <i>cadaverina</i>	" <i>pipiens</i>
" <i>vomitoria</i>	" <i>albimana</i> ; and
" <i>domestica</i>	several others of
" <i>argentata</i> . I	this extensive
observed this	genus
species near	
Panmuir	
" <i>grossa</i>	Tabanus <i>bovinus</i>
" <i>tremula</i>	" <i>tropicus</i>
" <i>lateralis</i>	" <i>pluvialis</i>
" <i>canicularis</i>	" <i>caecutiens</i>
" <i>pluvialis</i>	" <i>autumnalis</i> .
" <i>cellaris</i>	These are
" <i>meteorica</i>	known by the
" <i>putris</i>	name of <i>Cleggs</i>
" <i>pumilionis</i> . The	in Angusshire
larva of this	
species is some-	
times hurtful to	
wheat	
" <i>frit</i> . The larva of	Culex <i>pipiens</i>
this is hurtful to	" <i>ciliaris</i>
barley	" <i>pulicaris</i>
" <i>cupraria</i>	Stomoxys <i>calcitrans</i>
" <i>aurata</i>	" <i>irritans</i>
" <i>angulata</i>	" <i>rostrata</i>
" <i>cursitans</i>	Conops <i>flavipes</i>
" <i>stercoraria</i>	Asilus <i>forcipatus</i> ; and
" <i>vibrans</i>	several others of this
	genus
	Bombylius <i>medius</i>
	Hippobosca <i>equina</i>
	" <i>hirundinis</i>
	" <i>ovina</i>

Of the Order *Aptera*, likewise, a number occur :

Lepisma <i>saccharinum</i>	animals they inhabit
Podura <i>nivalis</i>	Pulex <i>irritans</i> . This
" <i>aquatica</i>	troublesome little insect
" <i>filmetaria</i> ; and	is well known by the
others of this	name of <i>Flea</i> : it is
genus	reported by some authors
Termes <i>pulsatorium</i> ; the	that it has been tamed,
death-watch	and has lived six years.
Pediculus. Of this dis-	Its muscular strength is
gusting genus fifty-	so great, that it can leap
three or more species	200 times its own length,
are reckoned natives;	and drag a weight 8 times
they are named by the	heavier than itself

Acarus reduvius ; the tick	Cancer Norvegicus
" ricinus ; dog-tick	" pulex
" telarius ; often hurt-	" locusta
" ful to plants kept	" atomos
" in hot-houses	" stagnalis
" scabiei. This is the	" phalangium. This
" insect which	is the Cancer
" causes itching in	scorpio of
" the disease called	Stewart. I have
" the itch	found several of
" lactis	these near the
" muscorum	Sands of Barrie ;
" fungorum ; and	it is reckoned a
" several others of	rare species
" this genus	
Hydrachna globator	" platychelas of
" grossipes ; and	Pennant, a rare
" some others	species : I also
Phalangium hirsutum	found one of this
" grossipes	on the Sands of
" opilio	Barrie
Aranea diadema	Monoculus quadricornis
" redimita	" rubens
" montana	" pulex
" domestica	" longispinus
" viatica	" simus ; and
" saccata	several others
" extensa	of this genus
" latens	
Acarus senoculata	Oniscus asilus
" holosericea	" entomon
Cancer pisum	" œstrum
" longicornis	" aquaticus
" mænas	" oceanicus
" deputator	" assimilis. This
" pagurus ; crab, or	species is often
" parten	to be found
" araneus	among the Fuci
" horridus. This is	or dulse, when
" rather a rare	sold at the cross
" species	in Forfar
" bernardus	" asellus
" araneiformis	" armadillo
" corrugatus	Scolopendra electrica
" gammarus ; the	" forficata
" lobster	
" squilla ; the prawn	Julus terrestris
" crangon ; the	" complanatus
" shrimp	" sabulosus
	" omiscoides ; among
	stones on the hill
	of Finhaven

¹ Both these species are called in Angusshire by the name of *Firy tangs*, or *Meg wi' the mony feet*.

WORMS.

Of the Order *Intestina*, the following occur :

Ascaris. There are many of this genus to be found; they inhabit the intestines of every kind of animals

Scolex lophii. I have a specimen of this animal which was found in the fishing-frog

Strongylus. Of this genus there are two species; one of them found in the horse and the other in sheep

Echinorhynchus, and likewise the genera *Cucullanus* and the *Tænia*, are found in the intestines, and other parts of many animals, and often get their names from the parts or the peculiar animals they inhabit

Fasciola is a very numerous family: the *Fasciola hepatica* is found in the liver of oxen, swine, horses, and sheep, and is

said to cause a dropsical swelling of the abdomen
Gordius aquaticus : in ditches

Lumbricus terrestris : earth-worm
" *marinus* ; on the sandy shores

Planaria fusca
" *lactea* ; both in the Lake of Rescobie

Hirudo sanguisuga

" *vulgaris*
" *complanata*. This species is found common in a spring called the South Running Well, near Forfar

" *hyalina*
" *bi-oculata*. These two latter I observed in the Loch of Lintrathen
" *muricata* ; inhabits the sea

Of the Order *Mollusca*, we observe the following :

Limax ater; black slug
" *succineus*; red
" *cinereus*; great spotted
" *agrestis*; small grey
" *flavus*; amber ditto

Doris verrucosa. I have seen this not unfrequent on the coast. I have a specimen of it preserved
" *papillosa*. I have also a specimen of this
" *argo*. I have seen this species thrown

ashore at the Sands of Barrie
Aphrodita aculeata; cast on the shore, not unfrequent
" *squamata*
" *lepidota*

Amphitrite auricoma. I have seen several of this on the shore

Nereis noctiluca. These animals illuminate the sea, with a brighter splendor than the glow-worm's

Nereis pelagica; not un- frequent; I have a specimen of this preserved	Sepia media
Nais serpentina; common in the small pools of water at the east end of the loch at Forfar, among the Lemna minor and trisulca	" loligo. I have seen this species often driven ashore near Montrose
" proboscidea; in marshes,—ponds and ditches near Forfar	Medusa cruciata
Ascidia rustica; in the sea not unfrequent: I have a specimen of this preserved	" capillata
" mentula	" aurita
Actinia rufa	" octopus. They are not unfrequent in the sea; the greatest quantity I ever observed of them was at the village of Achmithie, six miles east of Arbroath
" crassicornis; and some others of this genus	Asterias papposa
Lernæa salmonæa	" lacertosa
" asellina	" rubens
" pectoralis. I have a specimen of this preserved	" seposita; rare
	" glacialis. I observed what I take to be a non- descript species at Achmithie
	Echinus spatagus
	" esculentus

Of the Order *Testacea*, we have the following:

Multivalves.

Chiton albus. I observed one of this species on the shore at the Sands of Barrie	Lepas balanus
" marginatus	" balanoides
	" anatifera
	" striata
	Pholas dactylus
	" crispatæ

Bivalves.

Mya truncata	Tellina radiata
" arenaria	" donacina
" margaritifera; common in Water of Esk	" ferroensis
Solen vagina	" rhomboides
" siliqua	" cornea
" ensis	" rivalis
" legumen	" carnaria
" pellucidus	" rugosa
Tellina fragilis	Mactra stultorum
" planata	" solida
	" lutraria

Univalves.

Cardium aculeatum	Turbo littorus; <i>wilk.</i> , or periwinkle
" echinatum	
" edule. This is the	
common cockle	
Venus gallina	
" islandica	" ruditis
" exoleta	" cimex; on the Back
" undata	Sands at Mont- trose, not unfre- quent
Ostrea varia	
" opercularis	" terebra
" edulis. The shells	" perversus
of this are some- times thrown on	" muscorum
the shore	" fontinalis; White
" maxima; but rare	Mire, near Forfar
Anomia ephippium	
" cepa	Helix striatula
" squamula	" planorbis
Mytilus rugosus	" lapicida
barbatus	" arbustorum
" edulis; the common	" aspera
muscle	" ericetorum
" pellucidus	" turtrum
" modiolus	" virgata
" cygneus	" rufuscens
" anatinus	" nemoralis
" discors; a rare	" stagnorum
species	" stagnalis; in Crook water, but rare
Cypraea pediculus; at	" palustris
Lunan Bay	" putris
Buccinum lapillus	" limosa
undatum	" auricularia
" reticulatum	Nerita glauicina
" minutum	Patella vulgata
Strombus pes-pelecani. I	" ungarica
observed this shell on the	" lacustris
Sands of Barrie	" fluvialis
Murex clathratus; it is rare	" pellucida
with us	Sabella alveolata
Trochus cinerarius	" lumbricalis
" zizyphinus; but	Dentalium entalis. I found
rare	this shell, with the animal
Turbo neritoides	in it, on the sand at
	Lunan Bay
	Serpula spirorbis
	" triquetra
	" contortuplicata

I have observed a great number of minute shells, of different species, on the moist places on the Sands of Barrie, which would require a magnifier to distinguish them, but never had time sufficient to examine them.

APPENDIX G.

LETTERS OF GEORGE DON.

As in the case of John Mackay, who, like George Don, maintained a correspondence with Sir James Edward Smith, there are no letters in the Smith correspondence in the possession of the Linnean Society from George Don. Don's letters to Mr. N. J. Winch have been referred to several times, and by the kind permission of the President and Council of the Linnean Society, in whose care the Winch correspondence is, I am able to present here copies of these letters, which I do from the standpoint of "Le style est l'homme même." I would like to add that in their reproduction I have been greatly assisted by Mr. B. Daydon Jackson, Secretary of the Linnean Society, who has not only himself transcribed for me some of the MS., but has also collated and corrected the proofs. I make no apology for quoting here (with his consent) his comments, in a letter to me accompanying the collated sheets, for they tell of Don's workmanship as it appears in the letters and also convey his impression of Don after perusal of them—an impression which readers generally will share. He says:—"I have just completed the collation of Don's letters, and am sending them with this. There still are some words which I cannot make out, after long study of them, Don's letters are so badly formed—a, o, u are practically the same, and so on. The letter dated Feb. 18, 1810, is an especially bad specimen; you have seen it, and remember that he has closely packed both sides of a sheet of foolscap with names of plants and remarks, wherever he could find half an inch of blank paper. The task of copying was a hard one, hence the blunders that arose; I hope I have corrected all, but nothing short of a photo. could do justice to the writer. His letters show him eager and enthusiastic, clamorous for help; like all collectors, far from bashful in asking favours, but also unmethodical and careless to the last degree. He is constantly excusing his want of attention to Winch's requests by his having mislaid the last letter."

George Don to N. J. Winch.

Forfar, May 11th, 1802.

Sir,—I received your letter a few days ago, and shall be very glad to exchange plants and specimens—no one likes a faithfull correspondent more than I doe. You mention some good things that is to be found in your neighbourhood, although I have all them except *Ribes petraeum* and *Bartsia Alpina*, although I have found *Bartsia* about 50 miles from Forfar, but could not remove it to grow. But I should be obliged to you to pot and plant it and 2 of *G[entiana] Verna* and try to establish them in 2 pots as the only way, and save seeds of *Thalictrum major* and *Cistus marifolius* and specimens, as I have but a weak plant of *Gentiana verna* and *Cistus marifolius*. I should be obliged to you to send a catalogue of all the rare plants within your reach, I mean your botanical excursions, and not to forget the cryptogamous famely, as I think you could assist me in specimens of some of the English hypnoms that I have not found in Scotland, and if I remember I seed some specimens of Lichens that I suspect came from you. When I was on a visit to Mr. Mackay about Sept. last, a new one you had discovered, and *imversus*, both which I should be glad to have, or any other you may judge rare. But I shall see by your catalogue what is in your power to assist me with. I have laboured hard for this last winter and have made several new discoveries in that intricate part of the science, among which is a new hypnum. I call it in my herbarium *fontenalooides*, and another *alpinum* which Dr. Smith is to adopt my names for in his *Flora Britanica*, as he by letter informs me, and 3 or 4 new hypnoms which I have affixed no name to as yet. One of them I think of calling *mimosioides* and another *trichomonoides* as they both belong to the first division, and 2 more I have not thought of names that would be applicable as yet, and a new bryum that comes nearest the *Grimmia cibrosa* of Hedweg, and a new *Gymnostomon* I call *maritima* from its growing near the sea, and a new *Orthotrichum* Dr. Smith is to call *obtusifolium*. I found this on the Bark of a willow tree in the Botanic Gardens while on a visit to our mutual friend Mr. J. Mackay who is no more. In calling back to my mind that worthy man excites painfull sensations in my breast and wound my feelings deeply. Besides this *Orthotrichum obtusifolium* I have 4 or 5 more I believe are non Descripts and I have sent them to Dr. Smith but have received no answer from him as yet, but I suppose from them and some other *Cryptogama* I have sent him, he will require some little time to determine some of them. I have also Discovered a new *Spergula* I call *maxima* and a new *Carex* that comes nearest *limosa* but wants the strong creeping roots that are so characteristic in *limosa*. Dr Smith declares it new to him also, and *Stellaria scapigera* of Wildenow, Dr. Smith informs me that neither he nor Wildenow knew its proper habitat, and *Potamogeton heterophyllum*, *Fl. sesilis* and another one I have not

been able to Determine as yet. I have found a number of Dickson's new mosses also. I was the first finder of *Convallaria verticillata*, *Carex pulla*, *Festuca calamaria* having found them in 1789 and 90 and *Eriophorum alpinum*, and *Juncus castaneus* and the *Spergula Sagina maritima* and *Saxifraga rivularis*, but giving information or specimens they took the liberty to Declare themselves the Discoverers which was ungenerous in some Degree. If I remember *Thlaspi alpestre*, and *montana*, and *Hypochoris maculata*, and *Cypripedium calceolus* and *Serapis grandiflora*, and *ensifolia* are found not far Distant from you which is plants I want much and as I lived in Yorkshire half a year at Broadsworth near Doncaster where were found the rare plants *Ophrys apifera*, and *insectifera*, and *spiralis*, and *Orchis ustulata*, and *pyramidalis*, all plants I want much, I shall be glad to hear from you soon and the catalogue as soon as convenient. If I am wrong in your address pray put me right—you seem to have forgot it.

I am, sir,

Yours humble servant,

(Sgd.) G. DON.

George Don to N. J. Winch.

Sir,—I have sent you a number of your Desiderata and I shall send you the rest or as many as I can furnish you with in the Autumn along with a collection of Cryptogamia. I would have sent you more cryptogamic specimens had I not been tyed Down to time for I am going a long Botanical excursion to the north in a part of the highlands that has not yet been Investigated by any scientific men so that I flatter myself with some new Discovery.—As you observe my neighbourhood is excellent for cryptogamia particularly musci and especially the Genus *Bryum* and a number of the *Salix* and by no means contemptible in ether *Carex* or any of the genera of cryptogames though it Does not abound with old Forrests as many parts of England do.

I will be obledged to you to save as many specimens and seeds and procure as many plants as possible you can by the Autumn or at least by the time I return and I shall writ you upon my return and I shall let you know what success I have met with in my excursions.

Believe me Dear sir your obedient and humble servt.

(Sgd.) G. DON.

Forfar June 29th 1802.

N.B.—The figures is the number of plants I would wish of each sort thos with no figuer I only wish a good plant or 2 of a kind.

PLANTS.

Equisetum fluviatile +	Sium latifolium +
4 Orchis pyramidalis +	(Enanthe pimpinelloides +
6 " ustulata +	Frankenia laevis
6 Ophrys muscifera +	Euphorbia paralis
4 " apifera +	Rosa tomentosa +
2 Serapas longifolia +	" villosa +
4 Cypripedium calceolus +	4 Dryas octopetala +
Schoenus compressus +	4 Cistus marifolius
4 Calomagrostis epigejos +	Thalictrum majus
Potamogeton marinus +	Statice lemonium +
6 Primula farinosa +	4 Orobanche major
4 Hottonia palustris +	Trifolium hybridum
Ribes petraeum +	ochroleucum
" spicatum	Carduus acaulis
Atriplex portulacoides	+ Carex capillaris
6 Gentiana verna +	" muricata

I will be obliged to you to send me specimens of those contained in this list and if to spare send 3 specimens of each sort. But those marked with a cross thus I have specimens of that will Do for my herbarium.

SEEDS.

Trifolium striatum +	Chenopodium olidum
" glomeratum +	hybridum
" scabrum	Atriplex littoralis
" maritimum	pedunculata
" ochroleucum	Beta maritima
Crips biennis	Beta tenuissimum
Cichorium intybus +	Sison amomum
Carduus eriophorus +	Pastinaca sativa
" acaulus	Smyrnium olusatrum
Erigeron canadense	Pimpinella magna
Senecio tenuifolius +	Apium graveolens
" squalidus	Myosurus minimus
+ Centaurea calcitrapa	Frankenia Laevis
Matricaria maritima	Rumex aureus
Zannichellia palustris	+ Saxifraga trydactylites
Panicum viride	Arenaria verna
" dactylon	Reseda lutea
Poa distans	Euphorbia paralis
+ Rottbolia incurva	Papaver hybridum
Amaranthus blitum	Cistus marifolius
Potamogeton Densus	Statice limonium
Ruppia maritima	Lamium desctum
Hottonia palustris	Melissa calamintha
Anagallis tenella	Bartsia alpina
Samolus Valerandi	Antirrhinum minus

Antirrhinum spurium
+ elatine
Lepidium didymum
Thlaspe alpestris
Sisymbrium terestre

Erysimum cheiranthoides
Brassica minosis [monensis?]
oleracea
Lathyrus hirsuta
picris echoioides

SPECIMENTS WANTED.

Hypnum sciuroides +
If in fructification dendroides +
If in do. proliferum +
If in do. lutescens
If in do. sericeum
If in do. velutinum
cylindricum
Fucus subfuscus
varabilis [variabilis]
plicatus
lichenoides
mamillosus
loreus
natans
repens
Conserva spongiosa
gelatinosa
elongata
pennata
parasitica
Splachnum ovatum
ampullaceum
Polytrichum aloides
" alpinum
Mnium heteromalum +
If in flower glaucum
pellucens
If in flower arcuatum
Bryum paludosum
If in fruct. laterale +
aestivum
Only if in fructification alpinum
fontinellis
antipyramticum
Lichen + albus
+ jolithus
+ atro-albus
calcareus
+ immersus
muscorum
confluens
canescens

Lichen + coeruleo-nigrescens
+ niger
+ Baeomyces
+ sphaerocephalus
+ calvus
vernalis
concentricus
+ punctatus
scruposus
+ atro-cinereus
+ Dicksoni
+ tricolor
+ cerinus
+ floridus
+ multifidus
cartilagineus
lanatus
torrefactus
Deustus
perlatus
+ granulatus
+ cristatus
+ sinuatus
+ fascicularis
+ simplex
crenulatus
+ crenularius
+ subimbricatus
+ carnosus
+ lacustris
+ frigidus
+ exanthematicus
+ quadricolor
+ rimosus
+ psora
gelidus
+ laevigatus
+ anincus
If in fruct. fragilis
papillaris
muscicola
exilis
saturninus

If in fruct. inclusus	Hydnnum Barbajovis
haematomma	Auricularia nicotiana
If in fructification send	papyrina
Jungermannia furcata	If any of the pezizas will make
pinguis	specimens you may add
asplenioides	any of them.
polyanthos	Nidularia campanulata
asplenifolia	laevis
platyphylla	Clavaria phacorrhiza
ciliaris	Lycoperdon epidendrum
Byssus aeruginosa	Sphaeria mori
aurea	sanguinea
fulva	mammosa
barbata	fraxinea
Merulus cornucopioides	Or any other you find in your
membranaceus	neighbourhood.
Fistulina pectinata	You can add seeds of the
Boletus nummularius	following
nigripes	Phalaris phleoides
substrictus	Bromus madritensis
betulinus	Euphorbia tithymaloides
medulla panis	Ranunculus muricatus
suaveolens	arvensis
cryptorium	Vicea "bengalensis
labyrinthiformis	Medicago prostrata
rubeolarius	Chrysanthemum Italicum
sulphureus	Centaurea galactites

I wish as many of the Cryptogames specimens as possible you can particularly Fucii and any of the fungia that will make specimens and particularly the genus lichen and if possible all those marked with a cross thus + as I have specimens of several of the others though some of them not good ones and wish to see what Difference is in those in your part of the country by those produced in our more northerly situation.

George Don to N. J. Winch.

Sir,—Pardon me for being so long in writing you for owing to my removal which I no doubt you have heard off is in a great measure the cawse of my long silence— I shall send you the habitats of the plants sent and continue sending you the rest of your dissiderata as soon as I can fall in with your letter which owing to me being but a short time removed I am at a loss where to lay my hand on a many articles as yet. I shall also send you specimens of my new discovered plants and Cryptogamiae but it will be 2 week yet before I can yet begin to make them out as our hothouses is all to take threwh hand [?] as non of the pots is turned as yet which owght to been done 6 weeks before—as it is but 2 week since I come to the

Edinburgh Botanic Garden—I will be obliged to you to send the specimens and plants and seeds as soon as convenient and send them by sea Directed to me at the Edinr. Botanic Gardens Leath Walk with a line of information—and any of the cryptogamia you can spare I should be glad to have 2 or 3 of each as I intend cultivating all them I can in the Garden particularly muscii a number of which I have planted already for from repeated tryals I have made myself wil not be difficult.

I am, Sir your humble servt.

(Sgd.) G. Don,

Botanic Gardens, Leath Walk.

Decr. 26th, 1802.

Mr. Nath. J. Winch.

¹[Answd. & Desiderata
sent 29th Decr. 1802.]

G. Don to N. J. Winch.

Sir,—I received your letter and after that some specimens which I return you my herty thanks — I would have answered yours in course but my youngest son was in a bad state of health for some time which ended in his dissolution that being the common tribute of nature—that so embarrassed my feelings that I found myself very unfit for some time to pursue my favourite pursuit of Botany.— I herewith enclose you a specimen of Alopecurus alpinus which I found on wet rocks on a high mountain in Aberdeenshire called Loch.na.gare. I would be obliged to you to send me the names of the specimens I sent you before and I will send you the habitats of them for I have mislaid your letter where I had them marked and therefore have forgot what I sent you I should be much obliged to you for any other specimens of Lichins and as soon as our Class is over I shall send you some in return but at this time I am so throng that it is impossible for me to do anything in that at present.

I am sir your humble servt.

(Sgd.) G. Don.

Botanic Gardens L. Walk, Edinb.,

June 7th, 1803.

G. Don to N. J. Winch.

¹[Recd. in
Jany. 1804.]

Dear Sir,—I should begin all my letters with confession of sins but it will be better to amend my ways—I have been much engaged

¹ In Mr. Winch's writing.

in arranging my cryptogame specimens this winter as I have never got that done before which you may see is a very inconvenient thing to lay my hand on any thing I want however I have got throw a many of them and I will have your collection completed as soon as possible — I will be much obliged to you for specimens of the *Hypnum crenulatum* and your *Lichen glaber* or *laevus* but I have mislaid your letter so cannot lay my hand upon it and any of your other *Cryptogamae* specimens that is to spare — the following is the habitats of the *Cardamine hastulata* the Mountain called Ben ibblech in the Isle of Skye, Isle of Rum else where I never observed it — *Stellaria scapigera* on mountain to the North of a Lake called Loch Errech in Badnoch and by the side of a Rivulet upon the side of a mountain by the side of a Lake called Loch nevis in the District of Knadert in Invernessshire but in both places truly rare — I will be obliged to you to send me a specimen of all you Discovered in your last years excursion as I cannot find your letter last sent and any of them I may have the carriage can be no object if you have them to spaire as on the other side is a list of plants and mosses and Lichens I want which is as follows. viz:—

A list of plants wanted for the Bot. Gardens viz.—

Zannichellia palustris
 + *Orchis pyramidalis*
 + *ustulata*
 + *Ophrys nidus-avis*
 cordata
 + *muscifera*
 + *apifera*
 + *Malaxis paludosa*
 + *Serapias longifolia*
 + *Cypripedium calceolus*
 + *Schoenus compressus*
 + *Panicum viride*
 + Specimens only, *dactylon*
 Amaranthus blitum
 + *Galium spurium*
 Ruppia maritima
 + *Hottonea palustris*
 Ribes petraeum
 spicatum
 + *Atriplex pedunculata*
 + *Beta maritima*
 + *Sison amomum*
 + *Smyrnium olusatrum*
 Drosera longifolia
 + *Ornithogalum luteum*
 Carex pedata
 + *Euphorbia paralias*
 + *Rosa tomentosa*

Geum rivale
 2 and 3 var.
 + *Thalictrum major*
 + *Bartsia alpina*
 + *Antirrhinum spurium*
 + *Orobanche major*
 + *officinale*
 + *Thlaspi alpestre*
 + *Brassica muralis*
 + *Lathyrus hirsutus*
 + *Trifolium hybridum*
 + *glomeratum*
 + *scabrum*
 + *strictum*
 + *Picris echooides*
 + *Crepis biennis*
 + *Senecio tenuifolia*
 + *Matricaria maritima*
 + *Centaurea calcitrapa*
 + *Equisetum fluviatile*.
 I wish specimens of the following
 if wild ones as I can easily
 get garden ones viz.—
Veronica montana
Panicum dactylon
Calamagrostis epigejos
Rotboelia incurvata
Primula farinosa

<i>Campanula hybrida</i>	<i>Brassica oleracea</i>
<i>Bupleurum tenuissimum</i>	<i>Lathyrus hirsutus</i>
<i>Caucalis daucoides</i>	<i>aphaca</i>
<i>Sium latifolium</i>	<i>Trifolium ochroleucum</i>
<i>Statice limonium</i>	<i>maritimum</i>
<i>Linum perenne</i>	<i>strictum</i>
+ <i>Myosurus minimus</i>	<i>Hypericum montanum</i>
+ <i>Narcissus biflora</i>	<i>Carduus acaulis</i>
+ <i>Frankenia laevis</i>	<i>Erigeron canadensis</i>
+ <i>Rumex aurens</i>	And those marked thus + I wish specimens of if wild and some of them I wish to compare with others I have collected in Scotland and in the South of England.
+ <i>Saponaria officinae</i>	Plants and specimens (continued)—
+ <i>Dianthus armeria</i>	+ <i>Phalaris paradoxa</i>
+ <i>Rubus chamaemorus</i>	+ <i>Bromus madritensis</i>
+ <i>Dryus octopetalala</i>	+ <i>Euphorbia tithymaloides</i>
+ <i>Papaver hybridum</i>	+ <i>Vicia berigalensis</i>
<i>Cistus marifolia</i>	+ <i>Medicago pratensis</i>
<i>Helleborus viridis</i>	+ <i>Chrysanthemum italicum</i>
<i>Melissa calamintha</i>	+ <i>Centaurea galactites</i> .
<i>Bartsia alpina</i>	
<i>Antirrhinum spirium</i>	
minus	
elatine	
orontium	
<i>Isatis tinctoria</i>	
<i>Lepidium didymum</i>	

The following is specimens of the cryptogama class which I wish much for in order to compare with some of mine and several of your lichins I have not specimens of.

Those marked thus + you need not send unless in fructification. I wish the Lichens much to compare with my own ones and where any of mine differs in the smallest degree from yours I shall send you a specimen of them in your collection.

<i>Lichen albus</i>	<i>Lichen calvus</i>
<i>Jolithos</i>	<i>vernalis</i>
<i>atro-albus</i>	<i>concentricus</i>
<i>calcareus</i>	<i>paralus</i>
<i>immersus</i>	<i>punctatus</i>
<i>sanguinarius</i>	<i>scruposus</i>
<i>muscorum</i>	<i>atrocinerus</i>
<i>confluens</i>	<i>Dicksoni</i>
<i>canescens</i>	<i>pezizoides</i>
<i>niger</i>	<i>tricolor</i>
<i>Oederi</i>	<i>tartareus</i>
<i>geographicus</i>	<i>cerinus</i>
<i>flavo-virescens</i>	<i>upsaliensis</i>
<i>sepincola [?]</i>	<i>luridus</i>
<i>Baeomyces</i>	<i>multifidus</i>
<i>sphaerocarpus</i>	<i>radiatus</i>

<i>Lichen carnosus</i>	<i>Mnium +glaucum</i>
lanatus	pallacens [?]
+glaucus	+arcuatum
+Islandicus	+proliferum
+pulmonarius	B paludosum
+furfuraceus	+tortuosum
+glomuliferus	<i>Fontinalis +antipyretica</i>
+caperatus	+alpina
+scrobiculatus	<i>Hypnum crenulatum</i>
torrefactus	sciuroides
deusta	+crispum
polyrhizos	+viticulosum
proboscideus	+crista-castrensis
polyphyllus	+dendroides
omphaleus	+alopecuroides
perlatus	+proliferum
orostheus	+parietinum
resupinatus	+palustre
+tessellatus	+cylindricum
tremella	+riparium
granulatus	sericeum
nigrescens	serpens
cristatus	velutinum
incurvatus	<i>Jungermannia +furcata</i>
fascicularis	+pinguis
simplex	+asploenooides
crenulatus	polyanthos
exanthematicus	platyphylla
subimbricatus	ciliaris
canescens	<i>Fucus natans</i>
lacustris	repens
hypnorum	esculentus
quadricolor	sanguineus
rimosus	mammilosus
psora	lichenoides
gilidus	plicatus
leucopheus	subfuscus
caeruleo-nigrescens	variabilis
carnosus	<i>Conferva spongiosa</i>
rappilosus	gelatinosa
muscicola	elongata
exilis	pennata
saturinus	parasitica
inclusus	<i>Byssus aruginosa</i>
acarrii	fulva
haematomae	barbata
<i>Splachnum ampullaceum</i>	<i>Merulius cornucopiooides</i>
ovatum	membranaceus
<i>Mnium heteromalum</i>	<i>Agaricus ostreatus</i>

<i>Agaricus planus</i>	<i>Piziza polymorpha</i>
<i>flabelliformis</i>	<i>Nidularia campanulata</i>
<i>reniformis</i>	<i>laevis</i>
<i>betulinus</i>	<i>Clavaria phacorhiza</i>
<i>glavicans</i>	<i>spathula</i>
<i>Fistulina pectinata</i>	<i>ophioglossoides</i>
<i>Boletus all you can</i>	<i>Lycoperdon stellatum</i>
<i>Hydnnum barbajovis</i>	<i>innatum</i>
<i>Auricularia nicotiana</i>	<i>epidendron</i>
<i>papyrina</i>	<i>Sphaeria sanguinea</i>
<i>Piziza punctata</i>	<i>mori</i>
<i>coccinea</i>	<i>mammosa</i>
<i>epidendra</i>	<i>fraxinea</i>
<i>inflexa</i>	and any others you have to
<i>navicula</i>	spare.
<i>cochleato</i>	

Sir,—You wished to know what is become of the late Mr. Mackay's Herbarium it is in the hand of his brother but I am certain he does not mean to part with it I believe it consists mostly in Foreign plants and what plants he collected the two excursions he had throw the highlands but I am certain it does not abound in neither lichens nor mosses as he had but little knowledge of that part of botany for in the year 1791 when I first became acquainted with him he knew very little of native or foreign plants so that the time he had to study would not admit of his having a thorow knowledge of every part of Botany althow he might be allowed to have been a very asidious young man—but I expect to see throw it soon an then I shall give you an impartial account—when you have any specimens of mosses or lichens of such as are plentifully about Newcastle I would be obliged to you for a few of each as I have several applications for some from some of my correspondents which I find I will be unable to supply them with and as I am getting in return such as do not grow plentifully in our Neighbourhood it may be in my power to send you a part of any I have in return—you wish to know if I have made any new discoverys in my last excursion the snow was on the high mountains by the time I got 40 miles from Edinbr. so that I was not so fortunate as I could a wished however I find I have the *Dicranium varians* of Swartz quite new to Britain and also I found the *Erigeron alpinum* near Perth and also the *Linnaea Borealis* quite in the lowlands a place one would have little thought of finding them I have also a new *Hypnum* which I found in 1802 which Dr Smith writes me he has named after me it is somewhat like *denticulatum* but at same time very Different.

I am yours truly,

(Sgd.) G. DON.¹

¹ Another untidy letter; the thread is broken and resumed all over the pages. Much of the mis-spelling is lost in transcription, because the writing at times is so hard to read that the letters cannot be distinguished.—B. D. J.

P. S. Could you inform me the price of Dicksons Fascicles of Dried plants the price of each.

G. Don to N. J. Winch.

Sir,—I enclose you a specimen of the *Encalypta alpina* which I discovered on rocks on the very summit of Ben Lawers in Oct^r. 1804 I have never found it anywhere else and but sparingly there. I send you this in order to show you I have not forgot you altogether your last letter I have unfortunately mislaid but you can write me your disiderata and where that genus is extensive in specis write me your wants of one famaly at a time and I shall be likly to send you them not long after I recieve your order and where the genes is not extensive such as *Splachnum*, *Sphagnum* &c. you can send 3 or 4 at once—I will be much obliged to you for specimens of the *Hypnum crenulatum*—*fluitans*—*alpinum*, *palustre*—*cylindricum*—*riparium*—*dendroides* if in fructification.

Splachnum ovatum & *ampullaceum*. *Neckera viticulosum* if in fruct. *Dicranum interruptum*—*sciuroides*. *Grimmia pusilla* or any thing else you may judge rare where you can preserve specimens. I should like specimens for my Herbarium and where you cannot procure so many I beg you will send me what you can with mislaying your last letter I cannot remember what you can furnish me with. I wish much for a plant and specimen of the *Scheuchzeria palustris* and a *plantago* you have found. I some time ago sent you my Desiderata of Lichens any of which I will thank you for. I have found near Edinr. lately the *Phascum stoloniferum* or *serratum* but which I cannot determine I think them both one. I am going a short botanical excursion but will be home soon.

N.B. I have found the *Valeriana pyrenaica* in two other habitats within this last year I have in consequence given it in my 4 Fasciculæ.

I am Sir your most obedt.

(Sgd.) G. Don.

I wish much for a few of each kind of the Mosses.

Royal Botanic Garden, Edinr.

Octr. 15. 1805.

Royal Botanic Garden,
Edin^r.

Dec^r, 3, 1805.

Sir,—In looking over my specimens I have found out your Disiderata last sent about 4 days ago and have lost no time in forwarding what nature specimens I have in my possession of your Disiderata which is as follows—viz.

<i>Veronica fruticulosa</i>	<i>Grimmia Schistii</i>
<i>Campanula rapunculoides</i>	<i>Sympyrum tuberosum</i>
<i>Orhys corallorrhiza</i>	<i>Linnaea borealis</i>
<i>Hieracium alpinum</i>	<i>Erigeron alpinum</i> of Dicks.
<i>Rosa involuta</i>	<i>Polypodium dentatum</i>
<i>Brassica campestris</i>	<i>Ajuga alpina</i>
<i>Grimmia nuda</i>	<i>Hypnum Donnianum</i>
<i>Donniana</i>	

I have a prospect of getting specimens of the *Ajuga pyramidalis* for my *Fasciculus* next summer and I am not sure but I may have a specimen of *Gentiana nivalis* but I have never found the *Arbutus alpina* in flower nor have I ever seen the *Cardamine bellidifolia* in Scotland. I hope also to be able to procure you the *Pyrola uniflora* to my *Desiderata*. I hope you will add *Byrum nigrescens* and *Bartrammia crispa* *Shoenus monococcus* and *Grimmia pusilla*, as your not satisfied with the last being distinct from *G. calcareum* where it is possible to send me specimens for my Herbarium I beg you will have it in view and where enough cannot be obtained I beg you will let me have as many as you can which will allways be a step to that object I will be glade to hear from you soon and believe me dear sir yours

most obedt and humble servt.

(Sgd.) G. Don.

P.S. I have sent them per Newcastle Waggon any other specimens you may want for your Herbarium you will have the goodness to write me. I subjoin a list of what new plants are published in my Herb. which I can let you have specimens of—viz:—

<i>Valeriana pyrenaica</i>	<i>Gallium spurium</i>
<i>Juncus supinus</i>	<i>Lichen</i> _____ [illegible
<i>Myagrum paniculatum</i>	and blotted].

G. Don to N. J. Winch.

Forfar, December 6th, 1807.

Sir,—Some time ago I Recievied your two volumes of the Botanists guide for which I return you my most gratefull thanks they contain a number of rare plants and especially the Class *Cryptogamia* the the [sic] method you have adopted in the Lichens I have reason to believe will become general your work is a just specimens of your zeal and ardent pursuit of Botany—since my return to Forfar I have made several excursions and found a good many new plants and I am anxious in every opportunity of rendering my colection as numerous as formerly in consequence of which I have sent you my disederata taken from the Botanists guide. Plants or seeds of as many as you can will much oblide me—your disederata

I am paying particular attention to but it contains several plants doubtful natives which have not been found for many years I shall send you all that I have native plants of. I have cultivated specimens of nearly all the remainder.

++ <i>Schoenus monoicus</i>	++ <i>Scheuchzeria palustris</i>
++ <i>Scirpus multicaulis</i>	++ <i>Cerastium pumilum</i>
<i>Panicum sanguinale</i>	++ <i>Reseda lutea</i>
<i>Agrostis spica venti</i>	++ <i>Euphorbia paralia</i>
++ <i>Poa procumbens</i>	<i>Rosa tomentosa</i>
<i>Cynosurus echinatus</i>	<i>nova</i> sp.
<i>Bromus multiflorus</i>	<i>Rubus crylifolius</i>
<i>secalinus</i>	<i>Potentilla aurea</i>
<i>arvensis</i>	++ <i>Cistus marifolius</i>
<i>Arund. epigejos</i>	<i>Thalictrum majus</i>
++ <i>Hordeum maritimum</i>	<i>Thymus calamintha</i>
<i>Triticum loliaceum</i>	<i>Bartsia alpina</i> seeds.
<i>Ruppia maritima</i>	<i>Antirrhinum spurium</i>
<i>Sagina erecta</i>	++ <i>Orobanches</i> all species.
++ <i>Anchusa officinalis</i>	<i>Lepidium ruderale</i>
++ <i>Primula farinosa</i> fl. albo or	++ <i>Thlaspi alpestre</i>
any other variety	++ <i>Cochlearia anglica</i>
<i>Hottonia palustris</i>	<i>Sisymbrium sylvestre</i>
<i>Anagallis arvensis</i>	++ <i>Brassica oleracea</i>
++ <i>Verbascum nigrum</i>	<i>Lathyrus hirsutus</i>
<i>Chironia littoralis</i>	<i>Ervum tetraspermum</i>
<i>pulchella</i>	++ <i>Trifolium maritimum</i>
<i>centaurium</i> fl. albo	<i>subterraneum</i>
No. 221 B. G.	<i>scabrum</i>
<i>Ribes spicatum</i>	++ <i>glomeratum</i>
<i>petraeum</i>	<i>striatum</i>
<i>Chenopodium urbicum</i>	<i>Picris echoioides</i>
<i>glaucum</i>	++ <i>hieracioides</i>
++ <i>Gentiana verna</i>	++ <i>Hedypnois hirtus</i>
Several plants of this if convenient.	++ <i>Crepis foetida</i>
++ <i>Bupleurum tenuissimum</i>	++ <i>biennis</i>
<i>Daucus maritimus</i>	<i>Senecio tenuifolius</i>
<i>Sium nodiflorum</i>	++ <i>Anthemis maritima</i>
<i>Sison aymomum</i>	++ <i>Centaurea calcitrapa</i>
++ <i>Statice limonium</i>	++ <i>Orchis pyramidalis</i>
++ <i>Drosera anglica</i>	++ <i>ustulata</i>
++ <i> longifolia</i>	++ <i>Ophrys muscifera</i>
++ <i>Juncus acutus</i>	++ <i>apifera</i>
++ <i> maritimus</i>	++ <i>Malaxis paludosa</i>
<i>Rumex acutus</i>	++ <i>Cypripedium calceolus</i>
<i>maritimus</i>	<i>Carex divulsa</i>
<i>palustris</i>	++ <i>extensa</i>
++ <i>Pyrola media</i>	<i>acuta</i>
++ <i>Scleranthus perennis</i>	++ <i>Sagittaria sagittifolia</i>

<i>Salix forbyana</i>	+ <i>Hypericum maculatum</i>
<i>rubra</i>	+ <i>Tamus communis</i>
<i>croweana</i>	<i>Juncus No. 221.</i>
<i>mas et fem.</i>	<i>Delphinium consolida</i>
<i>russelliana</i>	<i>Alopecurus bulbosus</i>
<i>bicolor</i>	<i>Bromus spiculitenuata</i>
<i>fusca</i>	<i>Cuscuta epithymum</i>
<i>rosmarinifolia</i>	<i>Limosella aquatica</i>
<i>aquatica</i>	<i>Sisymbrium amphibium</i>
<i>oloefolia</i>	+ <i>Brassica orientalis</i>
<i>mollissima</i>	+ <i>Erodium maritimum</i>
<i>decipiens</i>	<i>Artemisia gallica</i>
++ <i>Peucedanum silaus</i>	<i>maritima</i>
++ <i>Atriplex portulacoides</i>	<i>Atriplex pedunculata</i>
<i>Equisetum fluviatile</i>	<i>Salix radicans</i>
<i>Aspidium lobatum</i>	<i>Chlora perfoliata</i>
<i>Primula elatior</i>	

Those that are marked with one cross I have plants of. I only wants a few native specimens of each. Those marked with two crosses I wish a few plants of each particularly those that grow in your vicinity.

I am convinced you can only send me a small quantity at present I want as many as you can conveniently procure in the Spring and those that are anual I will thank you to collect when the season arrives some of the anuals however will remove very well in spring such for instance as the *Centaurea calcitrapa* it will be requisite to cut off the leaves when they are picked and pack them among Sphagnums they can be sent by a ship to Dundee—Directed to me at the Botanic Garden, Forfar.

Could you informe me how to direct to a Mr. Wilkinson a Botanist in or near Sunderland.

N.B. At some future period I shall be under the necessity of troubling you for some specimens of *Cryptogamia* but I am convinced the demand at present is sufficient.

Where plants cannot be procured of the *Salix* and *Ribes* Cuttings will do very well in so doing you will greatly oblide.

Your Humble Servant.

(Sgd.) G. Don.

P.S. I wish specimens of them as well as plants I have a specimen but I should wish for 2 or 3 specimens in order to complete some collectors of specimens

Yours as above

(Sgd) G. Don.

G. *Don to N. J. Winch.*

Forfar, Feb. 18, 1810.

Sir,—I received your letter in due time and I shall lose no time in sending you part of your *Disiderata* with several valuable and interesting additions they will leave Dundee by the first ship for Newcastle after the 24 instant—I am much obliged to you for your kindness in saving specimens for my Herbarium as I am now employed in finishing my 7 and 8 numbers after a stand of nearly 4 years for if I had not got Subscribers to enable me to have carried it on I could a predicted my *Discovery*s would a have been very limited in future but although my subscribers are not numerous yet I flatter myself they are respectable and likely to continue—and on my part shall exert every endeavour to make them interesting—if I remember right I have sent you the new plants which I have given in my 7 and 8 numbers which are *Campanula persicifolia*, *Sagina maritima*, *nova* species, *Potentilla opaca* of Linn *Rotbella filiformis*—I am to send you a package for Mr. Harriman which I beg you will take the trouble of forwarding along with yours if you would have the goodness to send the specimens you have collected for me and I will get some of them to help my 9 and 10 numbers—I formerly sent you a long list of *Desiderata* particularly of plants of my Garden I beg you will add *Rosa collina* and your *scaberosa*. I flatter myself I have the latter but wish to see your plant as also *Rosa tomentosa* and *villosa* and *Ribes spicatum* I have found the *Ribes petraeum* or *spicatum* in great plenty in my neighbourhood—I am very anxious to encress my collection of Growing plants as I have several Classes arranged and of consequence a number of blanks which I am making applications to all quarters to get filled up. I wish much for seeds of *Bartsia alpina* and I should like to have a few plants of *Gentiana verna* and if possible *Cypripedium calceolus*, *Tamus communis* and if you can observe one variety among them would like them also and if you can send me *Primula farinosa*, *Schoenus monoicus* with white flowers which I understand is not uncommon—[illegible] and—[illegible] and *Rubus caesius* but I do not want *Rubus corylifolius* as I have got it—Have you ever seen *Arenaria verna* with double flowers if you have got it pray send me it. I observed it among specimens collected in Derbyshire about 14 years ago. Is it possible to send me *Anthemis maritima* I have never seen it. I likeways wish much for *Juncus acutus* and *maritimus* and your new species and *Crepis foetida* and *Hyderserus hirta* can you send me plants or seeds of any of those you collected in Surry, did you not fall in with the following mosses *Trichostomum flexifolium*, *Tortula imberbis*, *Grimmia starkeana*—*lanceolata*, *Dicranum bipartitum*—*cylindricum*, *Trichostomum obtusum*, *Tortula barbata*,—*aristata*, *Hypnum medium*—*inundatum*—*tenellum* as they inhabit the south. I want specimens of all those even for my own private [?] herbarium. I must leave you to collect such specimens as you can with con-

venience get of those which will best answer you are a perfect judge for instance *Cistus marifolius*, *Schoenus monoicus* and *Pyrola medea* as I have specimens of all the other British species and would give the whole in a group together. I would like also a few specimens of *Carex extensa* as also plants and plants of *Carex acuta* both Orobanches plants and specimens and a few specimens of *Carex digitata*. I have already a few of both *C. digitata* and *extensa*. I would likewise be much obliged to you for specimens of all the Opegraphas as I have got a few specimens of the Opegrapha Lyelli I believe as many as will answer saved by C. Lyell Esq., New Forrest I would give as many of them together as possible. I am quite bewildered among them since they were made a separate family having neither Books nor specimens to study them by. I shall add a list of all the mosses which I want specimens of for my Herbarium and where you cannot send me enough send me what you can in order to compare with some I have which I am not certain of and there is some of them I dare say I have none of—they are as follows viz.—

MY DESIDERATA.

Tetraphis pellucida	+ barbata
Grimmia Dicksonii	aristata
+ hommamala	brevisetosa
verticillata	
Dicranum undulatum	Orthotrichum affine
+ interruptum	pumilum
fulvellum	rivulare
rigidulum	+ nudum
+ ovale	+ pulchellum
pulvinatum var B.	
squarrosum	Neckera heteromalla
taxifolium	Hypnum + polyanthos
flexuosum	myosuroides
+ cerviculatum	+ crenulatum
polyphyllum	+ serrulatum
Trichostomum + lineare	Teesdalia
fontinaloides	+ riparium
+ trifareum	praelongum B
Tortula rigida	+ stokesii
cunifolia	+ stramineum
	+ confertum
	murale

I have some specimens of most of the Hypnum but not sufficient to answer my purpose those marked thus + I want much even altho you cannot procure specimens enough for my purpose.

Hypnum velutinum	
intricatum	
tenellum	
implexum	
illecebrum	

Hypnum Schreberi	if in fruit
and	
fluitans	
rugosum	
+ aduncum	

Hypnum + palustre	Jungermannia qunquedentata
fluviatile	bidentata
filicinum	nemorosa
commutatum	bicuspidata
+abbreviatum	reptans
+chrysophyllum	platyphylla
scorpoides	curvifolia
+nigro-viride	tomentella
+alpinum	divaricata
+recognitum	minutissima
+attenuatum	All the Leprarias, but botryoides
+polymorphum	and alba.
Fontinalis capillacea	All the Pulveraria both species
squamosa	of Variolaria.
Bartramia crispa	Lecidea, all but the following
ithyphylla	viz :—
arcuata	parasema
I have plenty spec. of	petraea
B. Halleriana	atrovirens
Mnium +androgynum	silaceus
Bryum nutans	cupularis
trichodes	luteola
+carneum	incana
+capillare	icmadophylla
+annnotinum	hamatomma
+nigricans	var B.
ventricosum	vernalis
roseum	aurantiaca
lanceolatum	calva
cuspidatum	crenulata
+aristatum	orosthea
Poletrichum juniperinum	atrorufa
+aloides	lurida
nanum	vesicularis
+pumilum	Send
Sphagnum squarrosum	Caliceum claviculare
Gymnostomum No. 109	Gyrophora cylindrica
microstomum	erosa
Phascum cervicollum	Send me all your
patens	Variolaria
Phascum bryoides	Send me
muticum	Endocarpum hedwigia
Schreberianum	smaragdulum
crispum	Weberi
Jungermannia scalaris	
MY DESIDERATA continued.	
Thelotrema pertusum	Isidium Westringii
lepadinum	phymatodes
hymeneum	Urciolaria cinerea

Urciolaria	calcarea	Parmelia	scopulorum
	fimbriata		siliquosa
	exanthematica		pollinaria
	bryophila		polymorpha
	epulotica	Sticta	limbata
	cyrtaspis	Peltidia	rufescens
Parmelia	excisa		polydactyla
	pinicola		horizontalis
	sophodes	Citraria	juniperina
	ostracadermis	Citraria	var. prunastri
	coarctata	Cornicularia	muricata
	amylacea		opuntia
	impolita		viridis
	glaucoma		lanata
	diacaspis		aculeata
Turneri		Usnea	florida
dispersa		Baeomyces	placophyllus
frustulosa			caspitius [caes]
cerina			digitatus
stillicidiorum			cornucopioides
chloroleucum			diformis
vitellina			bellidiflorus
varia			cervicornis
squamulosa			fimbriatus
crassa			cenoteus
lepidota			alcicornis
spongiosa			spinosus
brunnea		Any of the Tremella that will	
epigaea		preserve	
saxicola		Fucus	ruscifolius
elegans			hypoglossum
miniata			membranifolius
murorum			natans
leptalea			tamarascifolius
virella			bifidus
recurva			edulis
aipolia			phyllitis
affinis			ciliatus
scorteia			laceratus
saturnina			laciniatus
lacera			confervoides
tuniformis			lycopodioides
flaccida			purpurascens
furva		Ulva	asparagoides
cristata			clavellosus
Scotina			articulatus
sinuata			opuntia
melaina			viridis
muscicola			limosa
and var.			

Ulva laciniata	Confervia limosa
lanceolata	decorticans
lactina	lucens
defracta	sordida
elminthoides	setacea
intestinalis	amphibia
fistulosa	littoralis
plumosa	aeruginosa
Confervia rivularis	corniculata
nitida	scoparia
fontinalis	flexuosa
confervicola	

I would need specimens of all your Confervia as I am not well acquainted with that family.

As also all your	As also Peziza and
Byssus	Auricularia and Clavaria
And all your	And Sphaeria and Reticularia
Boletus that will save for	Trichia and the genus Mucus
specimens	[Mucor?]
As also all your	Xylostroma gigantea
Fistulinas	— cordis
Hydnum auriscalpium	All your Rhizomorpha
barbajovis	and [illegible]
All your Helvellas that	Variolaria faginea
you can save	

You will see by this list that I am greatly at a loss with the lichens for although I know the most of Witherings yet from the Great improvements and additions and alterations I am in a manner bewildered among them having neither specimens nor books to assist me. I have little doubt I have a many of those I am asking from you but I would be obliged to you for 3 or 4 specimens of each sort as many of them as you can and specimens for Herb. Brit. of such as will answer I mean the rarer species you can conveniently and if you could send me them as soon as you can a [seal here] making some excursions early in the summer and that wa . . . [seal here] . . . e to collect not only them but new ones.

and if possible plants of Pyrola medea I have in cultivation all the other british species. I have seeds of Galium tricorne and spurium, seeds of Chironia pulchella and littoralis and Centaurea fl. albo, Hottonia palustris, Chenopodium glaucum. Atriplex pedunculata, Saxifraga tridactyla and Elymus europeus, Reseda lutea, Plants of Orchis ustulata, pyramidalis, Malaxis paludosa and specimens as also apifera and muscifera and specimens.

If you could send any of my Desiderata of growing plants this spring I mean such as one in your neighbourhood although it were

only one would be a great acquisition to my collection—I have discovered several new mosses and shall send you some in course.

I am Dear Sir your humble

Servt.

(Sd) G. Don.

G. Don to N. J. Winch.

Botanic Garden, Forfar,

Apr. 19, 1812.

Dear Sir,—I received a letter a few days ago by post from you and to Day your Traveller left me another but he was so short time in the place that it was impossible for me to send any thing with him owing to the confused state of my herbarium, but I have a complete Herbarium of all the British plants to make up for a gentleman and the Books is nearly ready to begin to—I expect them from the stationer in 2 or 3 daystine so that I will have occasion to find all my Discoverys and other rare plants—other ways it would a have taken me 3 weeks to a have found out the few contained in your Desiderata—I do not mean to charge you money but you will have the goodness to send me the specimens you mentioned you had collected when in the south of England and I gave you a long Disiderata of Living plants some time ago which I will thank you to send me what you can of my Disiderata among which I beg you will send me the *Juncus maritimus* and *acutus* and a new Discovery as also *Gentiana verna*—*Cypripedium Calceolus* *Schoenus monoicus*—and I have all *Anthemis maritima* and *Ribes spicata* and *Rosa collina*—*Atriplex portulacoides* *Serapias grandiflora* and *palustris* *pyrola media*—*Anchusa officinalis* *picris heracioides* *Carex depauperata*—*acuta* *Schoenus compressus* *mariscus nigricans* *Scirpus multicaulis* *Panicum sanguinale* seeds *Dactylon Cynosurus echinatus* seeds and specimens *Hordeum maritimum* seeds and specimens *Galium tricorne* seeds and specimens *Sagina erecta* seeds and specimens *Primula farinosa* flore albo *Hottonia palustris* *Chironia pulchella* seeds *Samolus Valerandi* *Chenopodium glaucum* seeds and specimens *Bupleurum tenuissimum* *Peucedanum silaus* *Sium nodiflorum* *Statice limonium* *Drosera anglica*—*longifolia* *Reseda lutea* *Euphorbia paralias* *Rosa tomentosa* *Thymus calamintha* *Bartsia alpina* seeds *Antirrhinum spurium* seeds and specimens *Orobanches* all both plants and specimens *Thlaspi alpestre* *Cochlearia anglica* *Sysimbrium Irio* *Lathyrus hirsutus* seeds *Eryum tetraspermum* seeds *Picris echioides* *Crepis foetida*—*biennis* *Orchis ustulata* and specimens—*pyramidalis* and sp. *Ophrys apifera* and *muscifera* *Sagittaria sagittifolia* *Tamus communis* *Atriplex pedunculata* *Aspidium lobatum* *Alopecurus bulbosus* *Cuscuta epithymum* *Sysimbrium amphibium* *Artemisia gallica* specimens of the following mosses *Bryum nigricans* *Orthotrichum pulchellum* *Dicranum interruptum* *corniculatum* *Tetraphis pellucida* *Grimmia Dicksoni*—*hommomalea* *Trichostomum fasciculare* *Tortula falax*—*cuneifolia*—*barbata*—*aristata* *Hypnum poly-*

anthos nigro-viride—crenulatum—serrulatum—Teesdalii—riparium
 — Stokesii—stramineum — confertum — tenellum — intricatum —
 illecebrium—alpinum—abbreviatum—chrysophyllum Mnium androgynum
 Bryum an [. . . seal here . . .]—ventricosum—Polytrichum
 juniperinum [. . . seal here . . .] aristatum — all your rare
 Phascum Bry[um,] Hypnum polymorphum, Parmelia d [. . . seal
 here . . .] lepidota — elegans—leptalea — furva — tereformis —
 spongiosa — sticticidiorum — chloroleucus — frustulosa — lacera —
 sageni [?] amylacea—sophodes—prunosa—urceolaria—cyrtaspis—
 bryophylla ?—epulotica—exanthematica Verrucaria alboatra [?]—
 acrotella — spongiosa — nitida — geminata — thelostoma, Lecidia
 carnosia—luteo-alba—rupestris—calva—Jangermannia quadricolor
 — hypnophila — atroalba — athrocarpa — miscellus some of your
 Oregraphas Baeomyces caespititium and as many of your Sphaerias
 and Conferva and Clavaria as you can my Desiderata is taken from
 your Botanists guide and any of them that you can conveniently fall
 in with in plenty send me a good many specimens I have done
 nothing in my herbarium for some time past but means to com-
 mence directly and have I 3 reams of paper in the stationers for
 that purpose.

I am yours truly,

(Sd.) G. Don.

I will thank you to send me what of the growing plants of my
 disiderata you can as the season is now arrived. G. D.

The following letter to Mr. Sowerby is now in the British
 Museum, Cromwell Road, and is reproduced here by permission
 of the Keeper of the Botanical Department. It shows that Don
 appreciated the importance for botanical purposes of the difference
 between cultivated and native specimens, and that he endeavoured
 when contributing to the "English Flora" to prevent misapprehen-
 sion on the part of its authors as to the source of the specimens he
 sent to them :—

George Don to Mr. Sowerby.

Forfar May 22, 1709.

Mr. Sowerby

Sir,—I have sent you a few plants as I understood that the
 specimens that is Dried will not Answer Drawing. I shail send
 up Every 2 weeks through the summer if they will answer you a
 few as they Come into flower as I sent you up at a former piored
 native specimens. You will find that owing to my soil and
 situation that they Differ very little from the native ones. Yours
 GEORGE DON.

N.B. When I have not sent before native specimens I shall send
 in course alonge with the green specimens native ones at the same
 time. G. Don.

[Address on the cover] Mr. Sowerby, No. 2 Mead Place,
 Lambeth, London.

POSTSCRIPT.

The foregoing sheets had gone to press when Miss M'Nab, with whom I was in communication regarding incidents in the life of her grandfather, William M'Nab, and of her father, James M'Nab, both former chiefs of the Garden staff, brought to my notice some correspondence that had been in the possession of her father between Dr. Neill and George Don, the son of the Forfar Botanist. The letters, with which is preserved the manuscript of Dr. Neill's biographical notice of George Don (No. 19 of the bibliographical list on page 91 of these "Notes"), show us Dr. Neill at the work of preparing this notice, and add to the information conveyed in Mr. Druce's Memoir. By the kind permission of Miss M'Nab I am enabled to reproduce them here:—

Dr. Neill to George Don (son of the Forfar Botanist).¹

Geo. Don, Esq., 44 Bedford Place, Kensington.

Edin^r, 1st Feb. 1848.

Dear George,—I long to hear it goes well with you and your brothers since I parted with you in the end of August, already nearly half a year ago. I had a letter and some seeds from Patrick since he went to Tooting nurseries, and wrote an apology for not calling for him. I hope you are trying to find a good situation for him. Are James and Charles still in the same situations?

Mr. Gardiner's Flora of Forfarshire came to me the other day; and I am mortified to find the author so much in the dark respecting your Father's history. For example: he says, Mr. Don served an apprenticeship to a *watchmaker* in *Forfar*; whereas it was a clock-maker in Dunblane. He tells us that at Glasgow he became assistant to the Professor of Botany there;—but he never did so; it was your brother David who became assistant at the lectures in Glasgow. He alleges that from Glasgow Mr. Don went to Edinburgh, where Messrs. Dickson introduced him to Sir J. E. Smith &c.; whereas, he went to Forfar from Glasgow, and took a long lease from Gray of Carse of Dovecot-hill, and it was Mr. John

¹ The manuscript of this, in Dr. Neill's writing, is a draft of the letter and unsigned.

Mackay (not Dickson & Co.) who made him known to Sir J. E. Smith. Brodie of Brodie recommended Mr. Don to Dr. Rutherford, and he then sub-let Dovecot-hill, and removed to the Botanic Garden at Edin^r. Here he spent 4 or 5 years, latterly studying medicine and surgery; and then returned to Forfar, practised as a country doctor, renovated his botanical collection of living plants—and visited Clova Mountains, adding several new plants to his former discoveries, and here he died.

Could you assist my memory as to some dates and places? For instance. 1. Where was Mr. Don born and what was your grandfather? 2. Can you fix in what year it was that I first visited the garden at Forfar?—there were only three children then, yourself, David, and a little sickly sister.¹ 3. Do you recollect in what year the family came to Edinburgh?² you were a stout chap—David a little boy, and also James. Patrick and Charles were born in Leith Walk. 4. Do you recollect in what year Mr. Don died and in what month Mr. Brown and I visited Dovehill? 5. Could you point out the spot in Forfar Churchyard where your father was buried? My opinion is that British botanists ought to mark the spot by a simple but massy and enduring monument, and I may add that to my knowledge several are anxious to have an opportunity of testifying their admiration of his zeal and success as a practical botanist, and their deep regret for aspersion cast on his memory, regarding the reality of his discovery of *Lychnis alpina*, *Sonchus cœruleus*, &c. now so thoroughly wiped away. Where, it might have been asked, could Mr. Don obtain the seed of *Lychnis alpina*? It has never been known to produce seed in cultivation. 6. Can you mention other plants, the reality of which was sneered at by some English botanists? and can you state what are the plants mentioned by your Father, and not yet *re*-discovered by searching botanists: I recalled *Potentilla tridentata* and *Hierochloe borealis*.

Hierochloe borealis is called by Sir W^m. Jac. Hooker a "valuable discovery by the late acute Mr. G. Don"; but is now denied. *Potentilla tridentata* is in the same predicament: but will yet be *re*-discovered.

Be so good as write me fully on all these points.

Mr. George Don (son of the Forfar Botanist) to Dr. Neill.

44 Bedford Place, Kensington,
Feby. 28 1848.

My dear Sir,—I intended to have written to you long before this, but something always came in the way to prevent it. James and Charles are still in their old situations, the latter got married in Sept^r or Oct^r last, but I have not yet seen his wife. As to

¹See pages 62, 63 of the Memoir in these "Notes"—I. B. B.

²See page 63, footnote 2, of the Memoir in these "Notes"—I. B. B.

Patrick I have no influence with any party who can assist him to a situation, as I am perfectly unknown in the Horticultural world. James and Charles have more influence with nurserymen, both dealing with Mr. Knight in the King's-road for seeds, &c., and even Patrick is much better known among gardeners and nurserymen than either of us, having attended most of the flower-shows, and been very successful in gaining prizes, but the fact is a good situation is difficult of attainment unless the influence be considerable. I hope, however, that he will soon succeed, for very few gardeners have been more successful in the cultivation of plants, besides being a very careful and steady man. Fortune has not used him well.

With regard to my father's history I know but little, but what I do know either personally or from others I will endeavour to give in as consecutive a form as possible. I will therefore begin with my great-grandfather, who was a farmer in Mearns or Kincardineshire and who had two sons and one daughter, the eldest of whom Thomas one of whose sons resides in Lower James Street Golden Square London; the second Alexander my Grandfather who was himself a great cultivator of flowers for amusement, and followed the trade of a *Currier* first in Dundee and latterly in Forfar, but ultimately became a manufacturer of *Brogues* which he disposed of in the Highlands; and thirdly Helen the daughter who was married to a Mr. Miller two of whose sons became gardeners one of which was Mr. Miller gardener at Duplin Castle Perthshire and the other Mr Miller of Belmont Castle Forfarshire. My Grandfather Alexander married Jane Fairweather the daughter of a farmer in Mearnsire by whom he had two sons and several daughters, the eldest George my father, so named after his uncle George Fairweather a *Bayordie* a farm so called in Kincardineshire, the next William my Uncle who became a Clock and Watchmaker in Forfar, many watches bearing his name as maker are still to be found in Forfar and its neighbourhood, but he ultimately emigrated to the United States. My father who must have been born in Dundee¹ and was probably first apprenticed to a Clock and Watchmaker there or he may have gone to Dumblane where I know he did work but whether as an apprentice or journeyman I have no means at present of ascertaining. He went to London I have been led to understand by land following his trade in various towns on the road, until he ultimately reached London where he procured work in a shop I believe in Fleet Street, where his expenditure being much greater than his earnings, my Grandfather had to remit him the means of enabling him to return to Forfar where he had then removed. My father about this time appears to have got tired of the Clockmaking business and went to learn Gardening or Horticulture with his cousin Mr. Miller then gardener at Duplin Castle, and here he appears to have made his first botanical excursions and to have formed the acquaintance of the Brown's of Perth, as also with my mother Carolina Clementina Oliphant Stuart who was then employed in Gask House the seat of Mr.

¹ See page 55 of the Memoir in these "Notes."—J. B. B.

Oliphant. Shortly after his marriage he removed to Glasgow and followed his original profession of Clock and Watchmaker, and where he made the acquaintance of Bailie Austin, and Dr. Stuart of Luss &c. still however continuing his botanical excursions, this must have been about the year 1793, where his two first children were born both daughters who died in their infancy. He afterwards returned to Forfar I suppose about 1795 or 1796 where my sister you have seen was the first born, afterwards a son George who died in his infancy, the next myself, then David, and then James Brodie all of whom were living when he went to Edinburgh in 1803 or 1804, but the last James Brodie died from teething soon after our arrival in Leith Walk. In Forfar my father, previous to his taking the lease of the Doo-hillock, rented a piece of ground in the neighbourhood where he cultivated plants, following at the same time his profession of Clockmaker. He then got a long lease 99 years of the Doo-hillock from Gray of Carse at a rent of 5 shillings per annum, where he built two houses to which he must have removed as soon as one of them was habitable. This ground the lease of which has still between 50 and 60 years to run has now become very valuable having been converted into a rail-road station. I consider I have been unfairly robbed by my fathers so called friends in Forfar principally lawyers¹ all of whom, however, are now dead. In the year 1803 or 1804 my father went to Edinburgh, through the recommendation of James Brodie of Brodie, leaving the ground at Forfar in charge of my Grandfather, where Patrick was the first born, then James Edward now Gardener at Knole Park near Sevenoaks, Kent. During my fathers residence in Edinburgh, he attended nearly all the medical classes, with the view ultimately of following that profession, the tickets or cards for these lectures with the names of the professors he attended are now in the possession of Patrick since David's death, and which cards you can have by writing to him should you consider them of any use.² In Forfar after our return from Edinburgh in 1807 or

¹ See page 60, footnote.—*I. B. B.*

² See page 66 and footnotes 2, 3 of the Memoir in these "Notes." The definite statement in this sentence throws a sidelight upon Don's career in Edinburgh which, flickering in Dr. Neill's remarks quoted at the page cited, I abstained from pointing out when his relations with Professor Rutherford were referred to. It is obvious that Don's ultimate aim to become a medical practitioner and the attendance upon classes and the work requisite for its attainment would scarcely be compatible with that whole-hearted devotion to the Botanic Garden essential in its Principal Gardener. In this of itself there would be an element which might bring about that "want of cordiality" between Don and Professor Rutherford to which Dr. Neill refers, and which may have been the foundation for Mr. Booth's phrases in his letter to Sir J. E. Smith. Allowing this, one may yet admire Don's efforts to secure a position in which he would be independent and able to prosecute his favourite study uncurbed by routine, and if we regret that for his own material success this did not happen we may also reflect that he must have experienced much real happiness amongst the plants in their native homes, and in this would find some recompense for the frowns of fortune.—*I. B. B.*

1808 there were two sons born the first died in his infancy, the second Charles Lyell born in 1810 now Gardener to Lord Beresford at Bedgebury Park near Goudhurst in Kent. About 1811 my father added the nursery-business to that of the Botanic Garden which turned out anything but profitable, the ground being so bad and the labour so expensive. In Jany 1814, my father died as well as my sister and Grandfather, I imagine his complaint was an internal tumour at least it was a desease which none of the medical men in the neighbourhood understood, my Grandmother having died of Scrofula probably also a tumour in 1802, and ultimately my brother David of a similar desease. In Forfar after my fathers return from Edinburgh he formed an extensive collection of plants principally hardy, as well as a considerable herbarium principally British, making numerous excursions to the mountains at the same time following the profession of a country surgeon which he had qualified himself for in Edinburgh.

Had he then thrown up botany he would have done well in his new profession, for he was very successful at first, but this ultimately dwindled in consequence of his being continually out of the way when wanted in search of new botanical discoveries which is not a pursuit adapted for a poor man with a numerous family. After my fathers death I and David endeavoured to continue the business but we were both too young and [in]experienced, actually knew nothing about the matter whatever, and even if we had we could have done nothing surrounded as we were by the Forfar sharks my fathers so called friends. About the end of the year 1815 my mother left Forfar with Patrick, James and Charles to reside at Newburgh in Fifeshire, and my brother David and myself went to Edinburgh. My mother afterwards left Newburgh and went to live at Gask and from thence to Smithy Haugh where she died about 1836 of a desease of the heart.

After my fathers death the only true friends we had besides (yourself) who countenanced myself as well as all my brothers was General Sir David Leighton of the East India Company's Service a relation (cousin) of my father by my grandmother's side and James Brodie of Brodie who both remitted sums direct to my mother on 2 or 3 different occasions.

My fathers publications were few, they were the 1 "Hortus Siccus"; 2 "Plants and Animals of Forfarshire" published in Hederwicks Statistical Account of Forfarshire; 3 A paper on Fiorin grass *Agrostis stolonifera*, published in some Society's Transactions, 4 Some account of the varieties of Scotch-Fir &c.

Answers to your questions.

My father never became an assistant to a Professor of botany in Glasgow it was David. He went from Forfar to Edinburgh not from Glasgow to Edinburgh. He had a lease of 99 years of the Doo-hillock. I am not aware who made him first known to Sir J. E. Smith, however the thing was perfectly easy perhaps Mr. John

Mackay perhaps Mr. James Dickson of Covent Garden. Sir J. E. Smith, however, made my father known to the then Bishop of Carlisle, who kept up a botanical correspondence with him till his death. He was recommended to Dr. Rutherford by James Brodie of Brodie, who after his return to Forfar used all his influence to procure for him Kensington Gardens after the death of Mr. Forsyth, but the present Mr. W. Aitons' power was too great. The garden at Forfar never was sublet during my father's life, but he left it in the care of my grandfather during his residence in Edinburgh, who resided on the spot.

Patrick and James were born at Leith Walk, not Charles who was born at Forfar after our return from Edinburgh. My father began to practise as a Surgeon immediately on his return from Edinburgh. His last excursion to the Clova mountains must have been in 1812; in 1813 he made some excursions to the West Highlands, went to Glasgow and from thence to Edinburgh for the last time when I believe he remained with you at Canonmills during his stay there. It was in autumn of 1814 you visited Forfar in company with Mr. Brown of Perth¹ my father having died the previous January at which time my mother and five sons were then alive, myself, David, Patrick, James and Charles. My sister having died in January about a fortnight after my father, my grandfather also died in the same month, year and place.

I cannot say when you visited Forfar before we removed to Edinburgh,² however we went there in 1803 or 1804. My sister, myself and David must have been the only children in existence at that time.

My Father was buried in Forfar Church-yard about a hundred yards from the Church on the South Side towards the East end of the Church.

I believe the only plants my father discovered which have not yet been rediscovered are as you say the *Hierochloe borealis* and

¹ We have Dr. Neill's own witness to the date of this visit. "I duly received your letter enclosing the order for £31 for behoof of the family of the late Mr. George Don. I scarce know by what fatality I have so long omitted to acknowledge it. I may state however that I waited till I should be able to send on acknowledgement from some one of the Committee at Forfar. This I procured when there in August last, and since that time I have been a good deal from home, in the North of England and elsewhere.

"I went by Perth and proceeded to Forfar in company with Mr. R. Brown of the Perth nurseries (an ardent Botanist, the discoverer of *Menzesia coerulea* as I once before told you, and who goes almost yearly to our mountains for living specimens of *Gentiana nivalis*, *Bartsia alpina* and other rarities) we found the two grown up sons of Mr. Don to be of the most opposite characters [here follow some remarks not complimentary to the son George Don, who apparently was determined to carry on the nursery in spite of the efforts of the Committee to dissuade him]. I have still about £80 in Sir W. Forbes's bank the Committee having wisely delayed drawing upon this fund as long as possible. *Smith Corresp. Linn. Soc.: Dr. Neill to Sir J. E. Smith, 20th October, 1814.*

² See page 62, footnote 2, of the Memoir in these "Notes."—I. B. B.

Potentilla tridentata, but that is no reason why they should not yet be refound, as it requires a practised eye to be there at the very time of flowering. But many plants become extinct in localities where they were formerly found in abundance.

Look at the life of my brother David in the Penny Cyclopædia compounded by Dr. Lankester, there is hardly a word of truth in it. He makes him attend lectures in Edinburgh when he could not have been more than 3 or 4 years old. Had he given data the thing would have looked ridiculous.

Believe me my Dear Sir Yours very truly,

GEORGE DON.

P.S. Write and let me know whether you have been able to read this scroll.

Dr. Neill must have written questioning some of the statements of the foregoing letter, for we have the following letter from Mr. George Don:—

Mr. George Don (son of the Forfar Botanist) to Dr. Neill.

44 Bedford Place, Cambden Hill, Kensington,
March 21st 1848.

My Dear Sir,—It may be that my father only learned the clockmaking and not the watch making business that mistake lies with me as I believed them to be the same, at least they are generally combined. It is also very possible that you are correct with regard to my father's excursion to England, and that it was connected with gardening, and that his first profession was that of a gardener, and that getting tired of it after his return from England apprenticed himself to a clockmaker in Dumblane; however you might gain some information on this head from Mr James Miller S.S.C. or Solicitor to the Supreme Court in Edinburgh the son of Mr. Miller of Dupplin my father's first master. All the information I have given on this head does not rest on my authority, it was derived from Mr. James Don my father's cousin in London who probably may have been wrongly informed, had I written entirely from my own knowledge without applying to him, the object of my fathers journey to England would have corresponded with what you have said on the subject.

I think Mr. James M'Nab can give you all the information required on the subject of my father's unrediscovered plants probably as you say there are two or three more such as *Chærophyllum aromaticum* and *aureum*, the former very distinct species I have seen growing wild myself near Arbroath, the latter is very difficult to distinguish if at all from *Ch. sylvestre*, it may be a variety; and possibly an *Eriophorum*, but of this genus I do not think there are more than three distinct species *E. alpinum*, *angustifolium* and *polystachion*, all the others are merely variations of the two latter, depending entirely on soil and situation for any character they may possess.

I will some day soon look over all the plants first discovered by my father, and give you a list of those that have not since been rediscovered.

And believe me to be remaining Yours sincerely,

GEORGE DON.

Dr. Neill.

In the light of this correspondence and its statements conflicting with some of those in the Memoir, we must conclude that at the present time our data are quite insufficient for the compilation of an accurate story of George Don's early life. It will be observed that the son does not answer Dr. Neill's direct question regarding the date of his father's birth, he conjectures the place was Dundee, and after giving a detailed account of his father's training and visit to London admits, when Dr. Neill doubts it, that much of it came from his father's cousin, with whom he is not prepared altogether to agree. It is evident that Dr. Neill's biographical notice, written in his later years and long after the events to which it refers, drew largely for its information upon the letter given above of George Don's son.

It has been stated¹ that a movement was begun in the middle of last century to collect funds for the purpose of erecting a monument to George Don, and we find Dr. Neill referring to this in his letter to George Don's son. Amongst papers of the late Mr. James M'Nab, to which his daughter has kindly granted me access, is the manuscript of a short communication intended for presentation to the Botanical Society of Edinburgh at its meeting in February, 1851—it may not have been read, for there is no notice of it in the minutes of the Society—in which he gives definite form to the general desire of botanists that a monument should be erected. There is no record of how far this movement went, but the following letters, which are printed by permission of Miss M'Nab, show that enquiries were made as to the position of Don's grave and the possibility of placing a monument in Forfar Churchyard:—

George Henderson (Nurseryman, Brechin) to James M'Nab.

Den Nursery,
Brechin, 17 January 1851.

Dear Sir,—We were speaking last year, on the very subject of your letter, to an old Gardener in Forfar a particular acquaintance of the late Mr. George Dons and who accompanied him on many of his excursions in search of plants in this and the neighbouring

¹ See page 88, footnote 3, of the Memoir in these "Notes."

Counties. This person was also present when he died and attended his funeral in the Church Yard of Forfar. He is moreover, if we mistake not a relation of the Sexton of Forfar who has been a good while in office as he is also of the same name. This persons account was, we are sorry to say of the same tenor as the information you already possess. He said it was now quite impossible to distinguish the exact spot or perhaps within some yards of it, but that he recollects near about the bearing of the place from the east end of the Church.

This is probably all the accuracy that could now be arrived at although we were to proceed to Forfar for the purpose [of] instituting an investigation.

I think I was mentioning to you that we had laid out a New Cemetery at Forfar last year. Prior to the opening of it the Old Church Yard was in a fearfully overcrowded state. For many years past they had been too glad to take possession of every bit which the vigilance of relatives did not keep watch upon. In many places the coffins were piled three or four above each other. Poor Mr. Dons nameless grave has probably, therefore, had several other tenants since his remains were laid there upwards of thirty years ago.

Might not the Monument be fastened on to the Church Wall "*Near this spot*"—There are several Mural Monuments there already. . . .

Dear Sir

Very truly Yours

(Signed) GEO. HENDERSON.

George Henderson to James M'Nab.

Den Nursery,
Brechin, 10 April 1851.

Dear Sir,—We have been extremely busy this long time past and hope therefore you will excuse us for not having sooner attended to your last communication.—We enclose a letter from one of the Bailies of Forfar which will give you the ideas of the people there about the matter.—What he says as to the identity of the spot is of course just hazarded without ever having been to look for the place, and I much fear that since the grave diggers know nothing about it, and since there have been no relatives about the Town to be looking after the place from time to time, other parties would be sure to search in vain—particularly in a Church Yard where no register was ever kept. . . .

I remain Dear Sir

Yours truly

(Signed) GEO. HENDERSON.

[Enclosure.]

James Ramsay to Messrs. Henderson.

Forfar, 7th April 1851.

Messrs. Henderson & Sons.

Dear Sirs,—I have communicated your letter of 24th ult. to the Magistrates and others and find there will be no objections to the proposed Monument to the memory of the late Mr. Don.

Some of his acquaintances here say they can point out the spot where he was buried, and if the Monument is not placed over his grave, it may be erected on the Church Wall.

The general impression here, however, is that the latter site would be very disadvantageous on account of the great expense &c., and I am convinced a very slight examination of those already up will satisfy any one of this.

Seeing the Old Church-Yard is now shut up, and not in any way resorted to, being so unfit for a place of recreation, a considerable number of influential people here are of the opinion that the *proper place* for the erection would be the *New Cemetery* where an appropriate site would at once be obtained. You might mention this to the promoters and if they adopt this, an attempt may be made to procure a few subscriptions in addition to the gratuitous site.

I am Dear Sirs

Yours truly

(Signed) JAS. RAMSAY.

For permission to print the following copy of a manuscript in the writing of Mr. William M'Nab I am also indebted to Miss M'Nab. It is interesting as giving us some idea from George Don himself of the extent of his collection of plants at Forfar, and it bears out what I have said in previous pages regarding the valuable information upon horticultural and botanical history that would be available should Dr. Neill's papers be discovered:—

NOTES FROM MR. DONS LETTERS TO MR. NEIL 3 & 4 DEC. 1812.

My Botanic Garden where I keep my Collection of Herbaceous Plants and a plant of each kind of Tree and Shrub is measured one Acre but perhaps it is a large one. I entered to it at Whitsunday 1796. I have a lease for 99 years of Charles Gray Esq^r of Carse. My Collection at present consists of the following *viz*

of Grasses including Carexes and the }	350
Remarkable varieties	
Annuals different species	1250

and if the varieties such as are sold in Seed shops were added would amount	}	1600
to 300 or 400 more would be Total		
Species of Shrubs and Trees and the		1230
Remarkable varieties		
Biennials or short lived Plants	}	330
not including varieties		
Perennials not including varieties		2588
If the varieties were added would amount	}	2588
to 400 at least more		
Green House Plants besides varieties		1200

I have a large collection of Roses perhaps more different species than is to be found in any Collection in Britain.

I have I believe the most extensive collection of Willows that is to be met with in any collection in Britain. I have several new species I have discovered myself of that Family.

I have a few of the best sort of the *Pinus sylvestris* since I wrote the report I visited that extensive Forrest at Mar Lodge, and I find that all the most remarkable Trees are of that variety. I measured several of them which measured from 15 feet to 18 feet in circumference and they were from 70 to 100 feet in hight.

Rare Green House Plants.

<i>Oxalis secunda</i>	
" <i>tetraphylla</i>	
" <i>asimina</i>	
" <i>coccinea</i>	
" <i>incarnata</i>	
" <i>repens</i>	
" <i>rosacea</i>	
<i>Tulbagea alliacea</i>	
<i>Tropaeolum hybridum</i>	
" <i>pinnatum</i>	
<i>Laurus fetans</i>	
<i>Sempervivum glutinosum</i>	
<i>Mimosa saponaria</i>	
<i>Salvia spinosa</i>	
" <i>hirsuta</i>	
<i>Lobelia minuta</i>	
" <i>Bellidifolia</i>	
<i>Carex australis</i>	
<i>Cyperus Brizoides</i>	
<i>Bupleurum coreaceum</i>	
<i>Campanula saxatilis</i>	
(Hardy). Shrubs.	
<i>Pyrus nivalis</i>	
" <i>angustifolia</i>	

<i>Berberis sibirica</i>	
" <i>illicifolia</i>	
" <i>chinensis</i>	
<i>Ribes dicanthum</i>	
<i>Rubus virginicus</i>	
" <i>sanguinolenta</i>	
" <i>Intermedius</i>	
<i>Rhamnus aliooides</i> [alnoides]	
<i>Genista hispanica</i>	
" <i>Lusitanica</i>	
" <i>sibirica</i>	
<i>Cornus sibiricus</i>	
" <i>circinata</i>	
<i>Cytisus elongatus</i>	
" <i>Leucanthus</i>	
<i>Viburnum ulmifolium</i>	
<i>Juniperus alpina</i>	
" <i>repens</i>	
<i>Arbutus thymifolia</i>	
<i>Vaccinium pensylvanicum</i>	
<i>Andromeda Cassinifolia</i>	
<i>Spiraea ulmifolia</i>	
" <i>chamædrifolia</i>	
<i>Robinia macrophylla</i>	
<i>Salix lanata</i> of <i>Linn</i>	
" <i>glauca</i>	
" <i>rupestris</i>	
<i>Iva frutescens</i>	

<i>Empetrum album</i>	<i>Geranium argenteum</i>
<i>Prunus depressus</i>	<i>Salvia nutans</i>
" <i>serotina</i>	" [name cut off].
" <i>chamæcerasus</i>	<i>Pyrethrum ptarmacifolium</i>
" <i>Susquhana</i>	" <i>Caucasicum</i>
" <i>pensylvanica</i>	
" <i>semperflorens</i>	
<i>Betula odorata</i>	
" <i>glabra</i>	
<i>Clethra scabra</i>	
" <i>acuminata</i>	
Rare foreign Carexes.	
<i>Carex Cyperoides</i>	
" <i>granularis</i>	
" <i>flexuosa</i>	
" <i>crinata</i>	
Rare foreign Roses.	
<i>Rosa fenestrata</i>	
" <i>× suaveolens</i>	
" <i>Teneriffenses</i>	<i>Melica exasperina</i>
" <i>Camschatense</i>	<i>Festuca diandra</i> .
" <i>lucida</i>	" <i>levis</i>
" <i>olympica</i>	" <i>cristata</i>
" <i>Cheirokensis</i>	<i>Poa peruviana</i>
" <i>mollis</i>	" <i>flava</i>
" <i>caesia</i>	" <i>laxa</i>
" <i>× nivalis</i>	" <i>Mollinerii</i>
" <i>× sanguisorbifolia</i>	" <i>Baldensis</i>
" <i>multiflora</i>	<i>Phleum capense</i>
Rare Herbaceous Plants.	
<i>Selinum pyrenaicum</i>	<i>Avena distophylla</i>
<i>Peucedanum caucasicum</i>	<i>Campanula alliarifolia</i>
<i>Sison salsum</i>	<i>Scutellaria pubescens</i>
<i>Bubon rigidus</i>	<i>Achillea distans</i>
<i>Daucus rigidus</i>	" <i>bipinnata</i>
<i>Thapsia foetida</i>	<i>Silene petrea</i>
<i>Panix quinquifolia</i>	" <i>repens</i>
<i>Phytemma campanuloides</i>	<i>Carduus serratuloides</i>
<i>Dianthus arenareus</i>	<i>Astragalus dauricus</i>
<i>Astrantia minor</i>	" <i>aristatus</i>
<i>Viola pensylvanica</i>	" <i>austriacus</i>
" <i>Rothmagensis</i>	<i>Trifolium montanum</i>
" <i>villosa</i>	" <i>bracteatum</i>
<i>Ranunculus abortivus</i>	" <i>expansum</i>
<i>Pothus foetida</i>	<i>Plantago alpina</i>
<i>Polymnia uvadelia</i>	<i>Rubus pistillaris</i>
<i>Geranium Ibericum</i>	<i>Lysimachia angustifolia</i>
	<i>Justicia americana</i>
	<i>Euphorbia epithymoides</i>
	" <i>androssæmifolia</i>
	<i>Pyrola maculata</i>
	" <i>umbellata</i>

¹ those marked thus × are new species of my discovery.

I need not call to your mind that I was 3 Botanical excursion last summer where I discovered among other things the following rarietis—a non-discript species of *Juncus* and the *Carex rariflora* of Walenbergh, vide *Stockholm Transactions*—and the Beautiful *Astragalus campestris* of *Linn* a valuable acquisition and the True *Salix Lanata* of *Linn* by far the Beautifullest of that Genus, besides what I take to be the True *Ranunculus nivalis* of *Linn* and 2 non discript species of *Salix*—the *Astragalus* and *Carex* and *Salix* are from the Clova Mountains the others from the high mountains which surround the head of Dee.

Of my discoverys I think the following the most remarkable all of which I have growing in my Garden.

<i>Eriophorum gracile</i>	<i>Myosotis repens</i> , new species
" <i>capitatum</i>	
<i>Phleum Michilii</i>	<i>Cheriophyllum aromaticum</i>
<i>Arundo stricta</i>	" <i>aureum</i>
" <i>riparia</i>	<i>Saxifraga elongilla</i>
<i>Poa depauperata</i> , new species	" <i>pedatifida</i>
<i>Avena planiculmis</i>	<i>Arenaria chlorifolia</i>
" <i>poæfolia</i> , new species	" <i>fastigiata</i>
<i>Triticum cristatum</i>	<i>Stellaria scapigera</i>
" <i>alpinum</i> , new sp.	<i>Lychnis alpina</i>
<i>Rottboellia filiformis</i>	<i>Spergula saginoides</i>
<i>Aira glomerata</i> , new species	<i>Rosa sanguisorbifolia</i>
" <i>lævigata</i>	" <i>nivalis</i>
<i>Carex ustulata</i>	" <i>suaveolens</i>
" <i>rariflora</i>	<i>Potentilla tridentata</i>
" <i>salina</i>	" <i>opaca</i>
" <i>straminea</i>	<i>Ranunculus nivalis</i>
<i>Juncus</i> , new species	" <i>alpestris</i>
" <i>gracilis</i>	<i>Myagrum paniculatum</i>
" <i>castaneus</i>	<i>Draba elongata</i> , new species
<i>Galium spurium</i>	<i>Anthyllis alpina</i> , new species
" <i>verrucosum</i>	<i>Astragalus campestris</i>
" and 2 new species	. . . [name clipped off at bottom of page].
<i>Sagina maritima</i>	